

SAFETY SUPPLEMENT

TECHNICAL MANUAL

**AEROSPACE EMERGENCY RESCUE
AND MISHAP RESPONSE INFORMATION
(EMERGENCY SERVICES)**

THIS PUBLICATION SUPPLEMENTS TO 00-105E-9 REVISION 10, DATED 1 MAY 2005, LOCATED AT WEB SITE:
<http://www.robins.af.mil/logistics/LGEDA/Documents/to00-105e-9.htm>.

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2 SEPTEMBER 2005**1. PURPOSE.**

This supplement provides instructions for update of TO 00-105E-9 Revision 10, dated 1 May 2005, affecting Chapter 6, Cargo Aircraft. This supplement is an updated file for the latest information regarding the C-17A aircraft procedures affecting the OBIGGS Legacy/OBIGGS II systems, center fuselage fuel tanks, and the Legacy/IPECO aircrew seats. See pages 16, 18, 33 and 34.

2. INSTRUCTIONS.

- a. This information, formatted in PDF, can be downloaded and printed from this web site by the end user. Use the most current Adobe Reader for this function, available free from Adobe.com.
- b. This supplement to Chapter 6 updates information based on newly researched source data information regarding this aircraft. The new file update should be added to Chapter 6 in TO 00-105E-9 Revision 10. The end user should save this file and print the affected pages, if applicable to the user's operation. File a copy of this Safety Supplement with the main Technical Order according to current regulations.

NOTE

This information should also be included in mobility boxes where applicable. If your unit or a part of your unit is serving elsewhere, they should be informed of this Safety Supplement and how to obtain it. See TO 00-5-1 for Local Reproduction of TOs and Digital Media guidance.

THE END

AIRCRAFT PAINT SCHEME

C-17A



AIRCRAFT DIMENSIONS

C-17A**OTHER DIMENSIONS:**

HORIZONTAL STABILIZER: - 65'

ENGINES (INBOARD) (GRIND TO ENG): - 8' 11"

ENGINES (OUTBOARD) (GRNT TO ENG): - 7' 8"

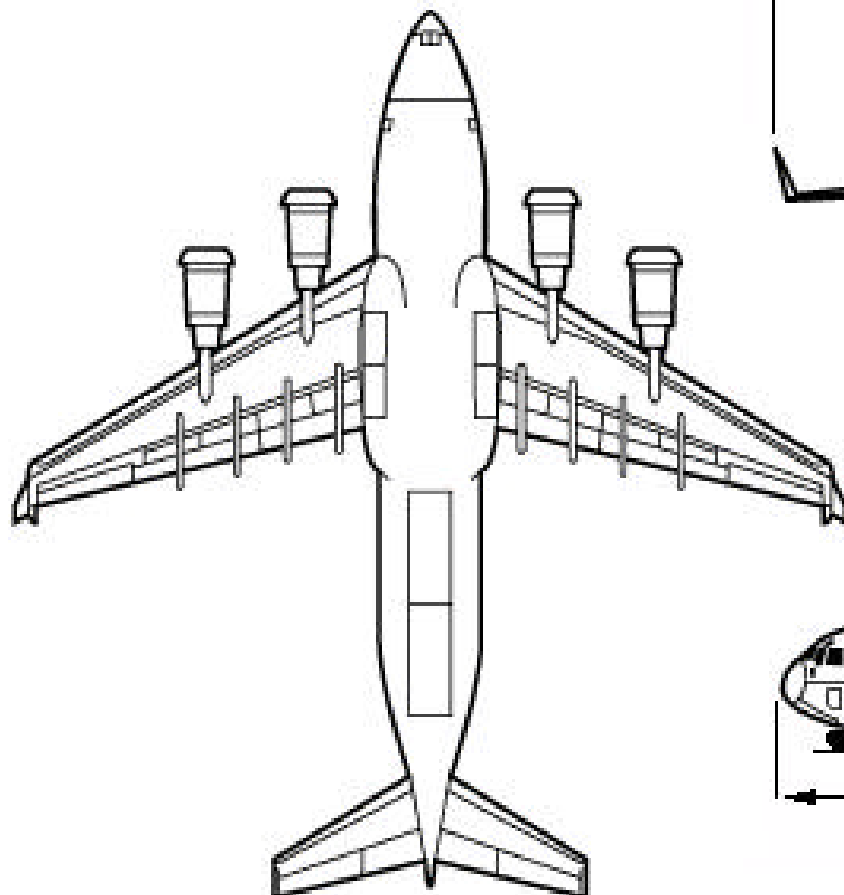
CREW ENTRY DOOR (DOOR TO GRND): - 5' 9"

FWD EMERGENCY DOOR (DOOR TO GRND): - 5' 9"

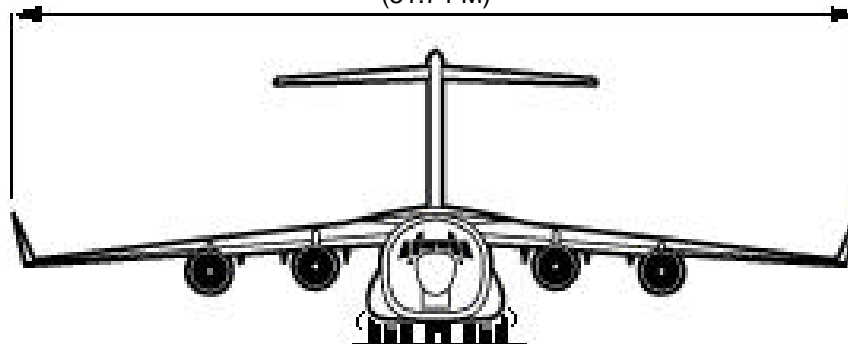
TROOP DOORS (DOOR TO FRND): - 5' 3"

CARGO COMPARTMENT LENGTH: -19' 10"

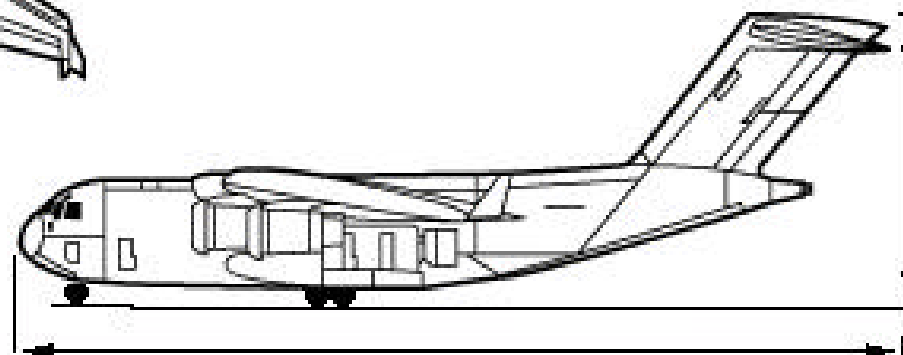
LOADABLE WIDTH: -18' 0"



WING SPAN
(AT WING TIPS)
169' 9"
(51.74 M)



HEIGHT
(GEAR DOWN)
55' 1"
(16.79 M)



LENGTH
173' 11"
(53.04 M)

DANGER AREAS

WARNING

Engines, at any power setting are capable of developing enough inlet duct suction to cause fatal injuries to a person too close to the inlet.

CAUTION

When loading or unloading personnel, baggage, or equipment through the crew entry door, with engines operating, stay clear of engine inlets. Secure all loose personal items before passing in front of operating engines. Application of high power settings with jet blast directed toward the path of other aircraft is not recommended. Jet blast is cumulative with surface winds and may exceed the operating limits of other aircraft.

NOTE:


If winds exceed 25 knots or ramp surfaces are slippery, add 50% to distance at intake.


LEGEND


RADAR:

 RADIATION 48 FT RADIUS


TAKE OFF THRUST:

 INTAKE
16 FT RADIUS

 BLAST (TWO ENGINES)
283 MPH AT 115 FT OR LESS
167 MPH AT 170 FT
69 MPH AT 338 FT
27 MPH AT 1100 FT
20 MPH AT 1400 FT

 TEMPERATURE:
200 DEGREES AT 65 FT
150 DEGREES AT 95 FT
100 DEGREES AT 202 FT

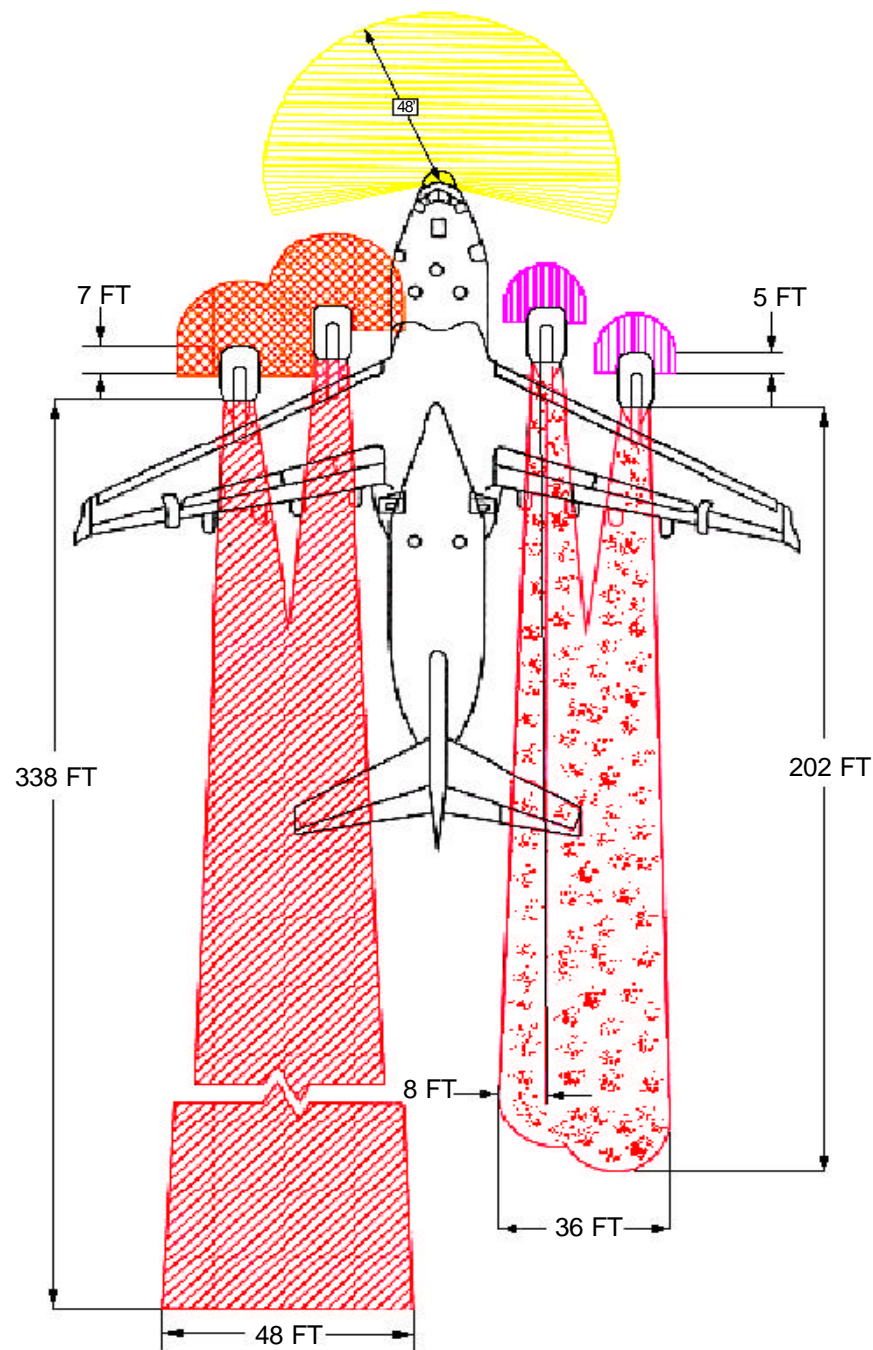
IDLE THRUST:

 INTAKE
9 FT RADIUS

BLAST
136 MPH AT 28 FT
68 MPH AT 95 FT

TEMPERATURE
125 DEGREES AT 22 FT
100 DEGREES AT 50 FT

C-17A



COUNTERMEASURES SYSTEM DANGERS

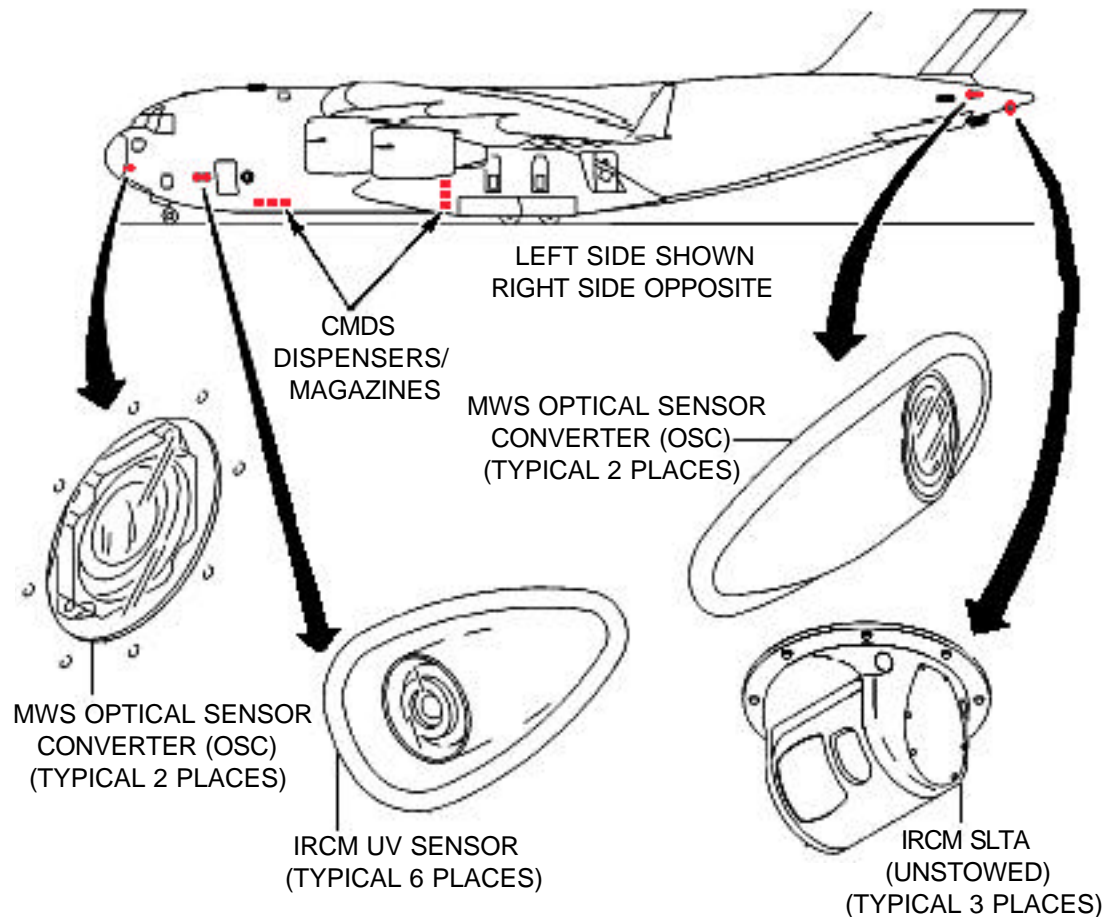
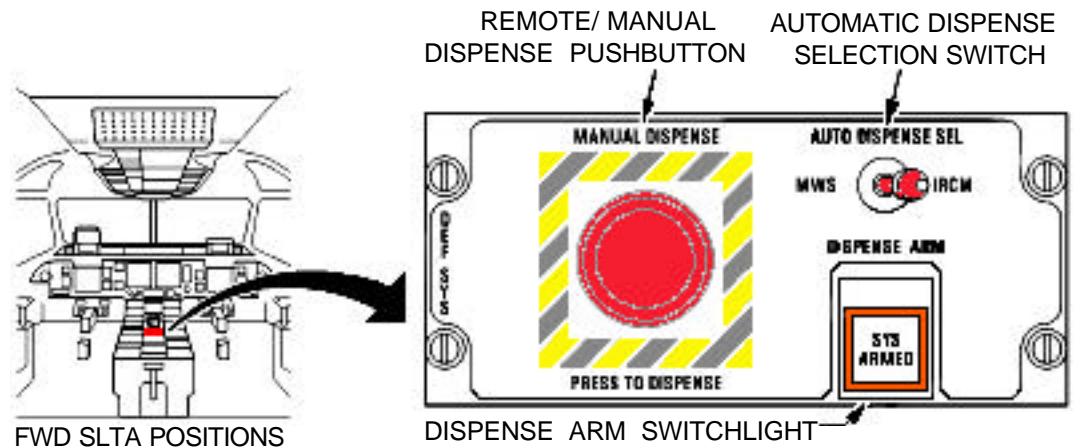
The Countermeasures Dispensing System (CMD5) provides an integrated, reprogrammable, computer controlled capability for dispensing expendables. The system is capable of programmed automatic response to incoming threats in conjunction with the Missile Warning System (MWS) and Infrared Countermeasures (IRCM), or of manual dispensing. The CMD5 consists of 12 dispensers for flares, 3 safety switches, 6 sequencers (one for every two dispensers), a remote dispense switch, a DISPENSE ARM switch, 1 Control Display Unit (CDU), 1 programmer, and a preprogrammed Mission Data File (MDF).

The AN/AAQ-24(V)12 IRCM System is a high power directional Infrared (IR) jammer. The system provides threat acquisition, tracking, and jamming of missiles from ejection through post-burnout or until threats can no longer be detected. The system can also interface with the CMD5 to dispense flares. The system consists of a Control Indicator Unit, annunciators for missile threats and system faults, a Signal Processor, six sensors, one (or three) Small Laser Transmitter Assembly(ies), (SLTA) a Transformer Rectifier, and a maintenance override switch.

WARNING

- The laser is invisible. It can injure eyes or skin within 187 feet (Laser Hazard Zone, pg C-17A.7). The eye hazard distance is significantly increased through binoculars, telescopes, telephoto lenses, etc. The laser can ignite paper, plastics, and dried foliage within 20 feet. Although the laser does not ignite fuel or hydraulic fluid within 20 feet, these liquids may ignite from burning paper, etc. within this zone.
- Do not touch the IRCM UV sensor windows. The sensors can be very hot during system activation and for an extended period thereafter. The sensors have an anti-icing capability that is active when the CIU mode control knob is in any position other than OFF. There is also a IRCM sensor located near the maintenance ditching hatch.
- The Optical Sensor Converter (OSC) and SLTA contains hazardous materials. Stay clear of SLTA as they may start rotating. Do not touch dust particles or residue from a damaged OSC and SLTA.

C-17A



COUNTERMEASURE DISPENSING SYSTEM

C-17A

NOTE:

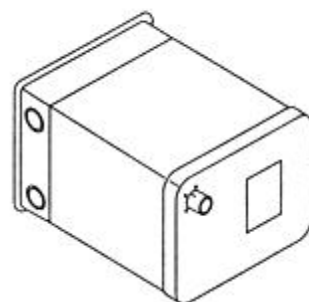
The C-17A aircraft Countermeasure Dispensing System is comprised of 12 separate dispensers (6 on each side) and 4 sensors (2 forward and 2 aft). Flares can be launched from either the auto or manual mode. When dispensers are loaded, they present a square or rectangular view. When dispensers are not loaded, they are covered with a 1.25" carbon epoxy covering. Dispensers have electrically actuated pyrotechnic squibs. The flares are mechanically dispensed from a magazine inside the dispenser.

WARNING

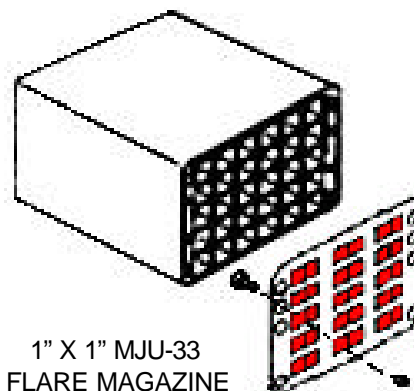
Dispensers, when actuated at close range, can present a serious danger to personnel. Best approach should be from the side if the integrity of the dispensers, magazines, or flares is compromised.

WARNING

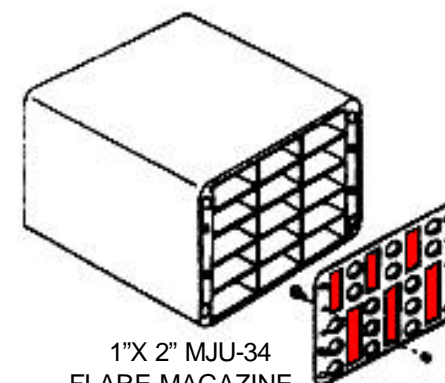
Do not disassemble the spectral filter assembly in the Optical Sensor converter (OSC). In the event of damage to the optical element in an OSC - producing dust, take precautions (respirator, goggles, gloves) to avoid inhalation, ingestion, or contact with skin and eyes. Each OSC contains nickelous sulfate hexahydrate, a probable human carcinogen. Harmful if swallowed, inhaled, or absorbed through the skin. Causes irritation, nausea, and vomiting.



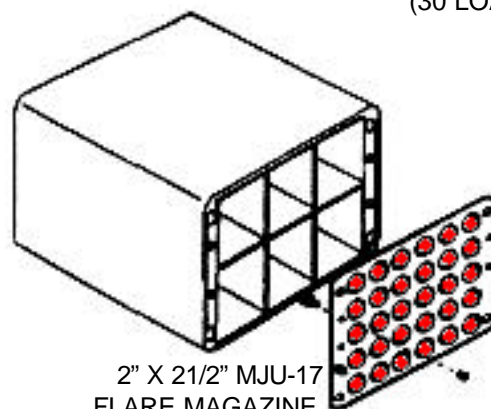
TYPICAL DISPENSER FOR ALL FLARE SIZES



1" X 1" MJU-33
FLARE MAGAZINE
(30 LOADED FLARES)



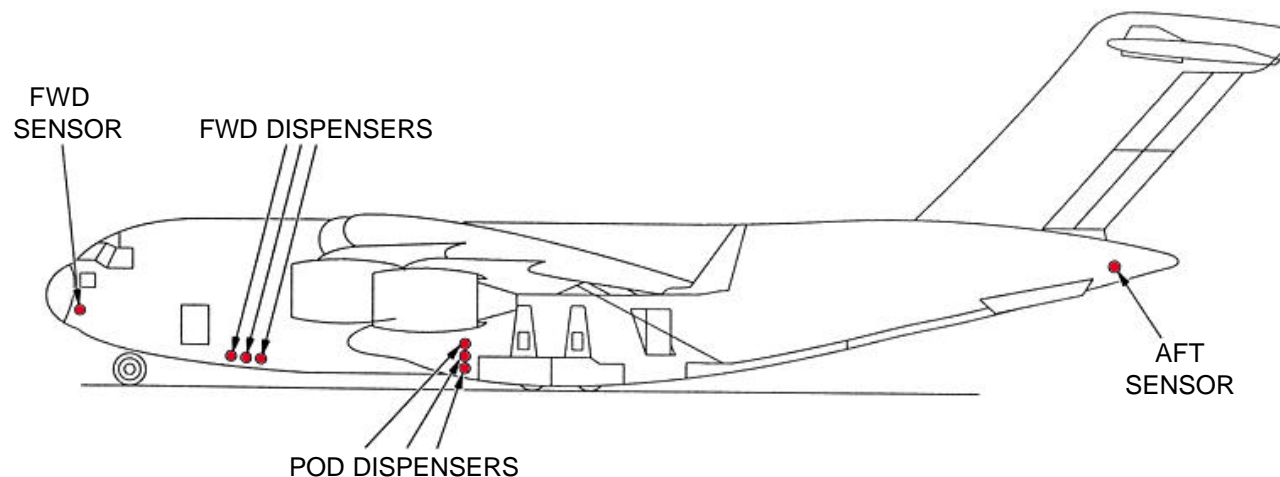
1" X 2" MJU-34
FLARE MAGAZINE
(15 LOADED FLARES)



2" X 2 1/2" MJU-17
FLARE MAGAZINE
(6 LOADED FLARES)

NOTE:

Each type of magazine consists of a composition block, with receptacles for countermeasures flare cartridges and a retainer plate.



COUNTERMEASURES SYSTEM SAFETY SWITCHES LOCATIONS

C-17A

1. SAFETY SWITCHES LOCATIONS

NOTE:

Observe the general condition of the aircraft as you approach it. If maintenance or other support activity is in progress, coordinate with ground support personnel, if available, to determine aircraft status besides the obvious.

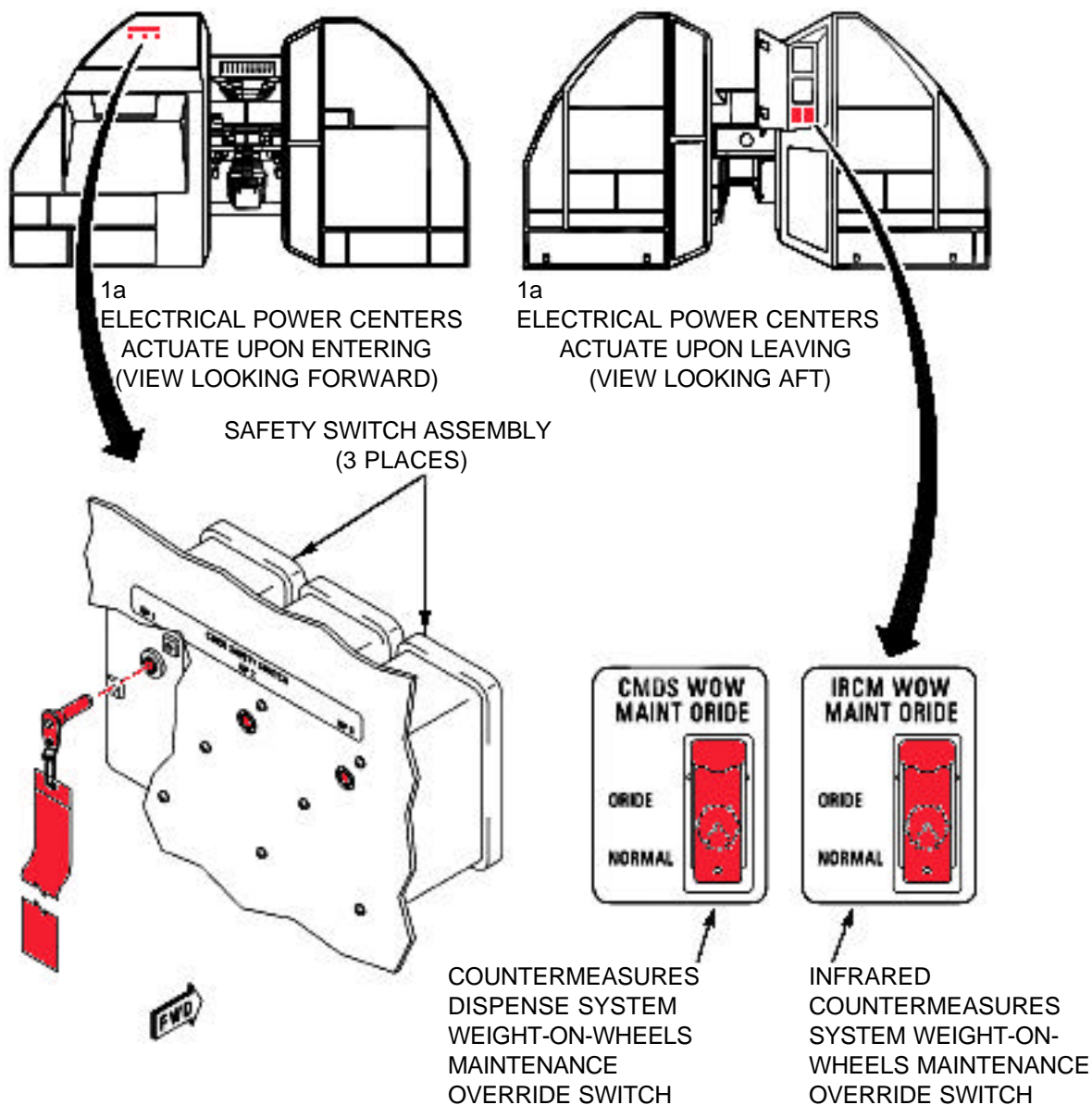
WARNING

- Beware of dangers prior to approaching within the laser unprotected eye/skin hazard area. See pages C-17A.7 and 8. Failure to fully install safety switch pins or place CMDS WOW MAINT ORIDE switch, which controls only flare launches, to the NORMAL position and could result in unintended jettison of payloads.
- Stay clear of the SLTA(s) as they will rotate periodically when the IRCM system is powered and performs autoboresight test to insure pointing accuracy of the turrets. The IRCM WOW MAINT ORIDE switch in the NORMAL position will keep the turret head in a stowed position during this procedure, the turret will still rotate (and laser will fire inwardly) whenever the system is ON (i.e. whenever a UDM/MUDM is installed in the CIU and the CIU MODE switch is in any position other than OFF). This occurs about every 15 minutes.

NOTE:

Complete "safing" of the system would include ensuring the CIU's MODE switch is OFF, no smartcard installed, and circuit breakers pulled.

- Safety the countermeasure systems, if required, by inserting 3 safety pins in the forward electrical power centers upper left side upon entering and placing the two system switches in the NORMAL position upper right side, located on the flightdeck bulkhead before leaving the flightdeck.



LASER ZONES

1. LASER SAFETY ZONE

- a. The IRCM System uses a Class IV Laser which can cause injuries to eyes and skin. The eye-safe and skin-safe distances are shown in the Table (Hazard Distance Summary for the IRCM Laser). Refer to the appropriate standards for necessary precautions when activating the IRCM Class IV Laser.

NOTE:

The eye-safe distances increase when viewing the laser through binoculars or telescopes.

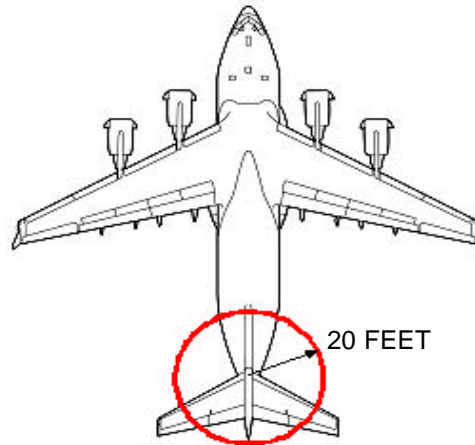
2. IGNITION HAZARD ZONE

- a. The IRCM System uses a Class IV Laser. Flammable materials with auto-ignition temperatures lower than JP-8 (i.e. 210°C, 410°F) such as paper, fabric, plastics and dried foliage may present a hazard within these zones. Although it has been shown that the laser alone should not ignite flammable liquids (i.e. hydraulic fluids, JP-4, JP-5, JP-8 and n-Hexane) these liquids could still be ignited by other combustible materials in the area should they be ignited by the laser. The severity of injuries to personnel may also be higher than those within the Laser Safety Zone. Refer to the appropriate standards for necessary precautions when activating the IRCM Class IV Laser.

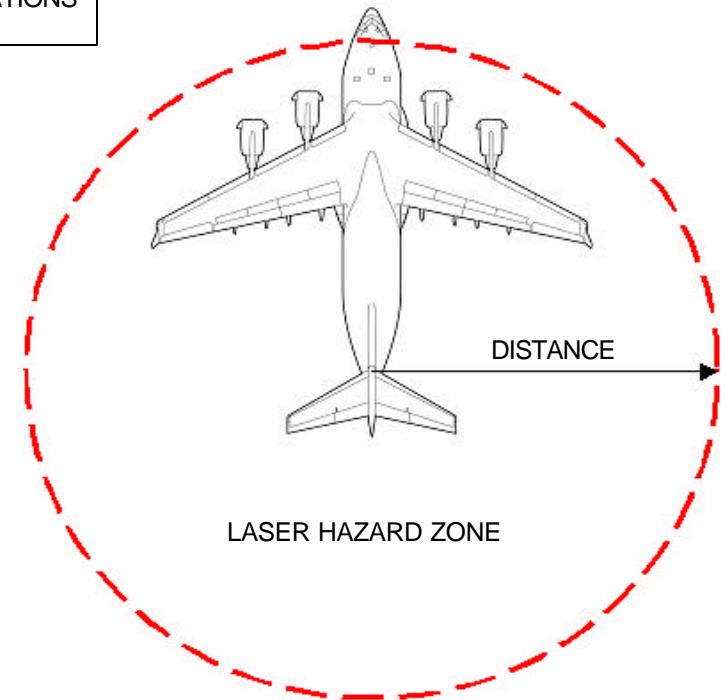
NOTE:

The distances defined in the table to the right will define the Laser Hazard Zone. Distances are measured on the ground from directly below the Aft SLTA, as shown. The 20-foot distance shown does not consider the height of the SLTA.

SINGLE SLTA CONFIGURATIONS
(Not to Scale)



IGNITION HAZARD ZONE



LASER HAZARD ZONE

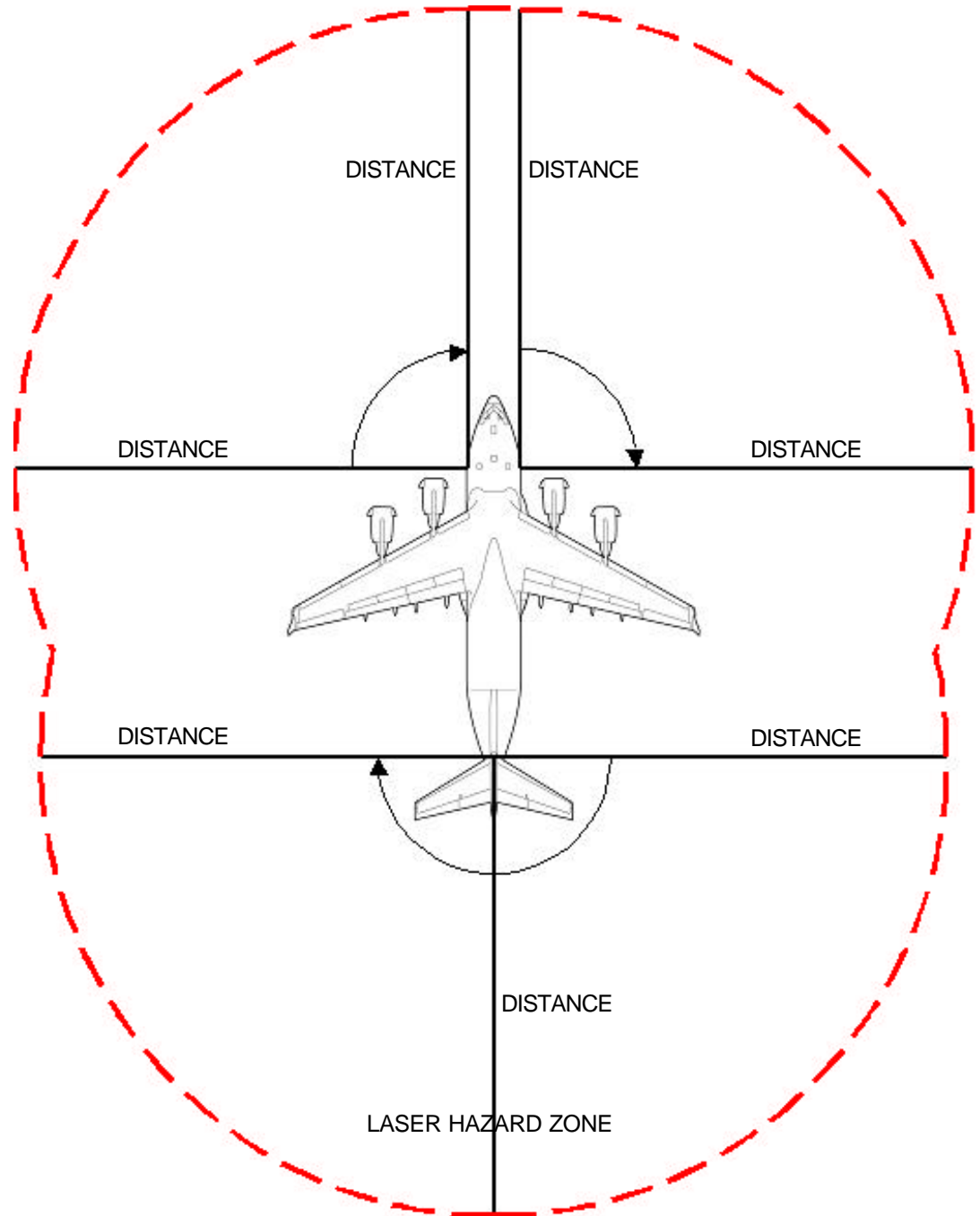
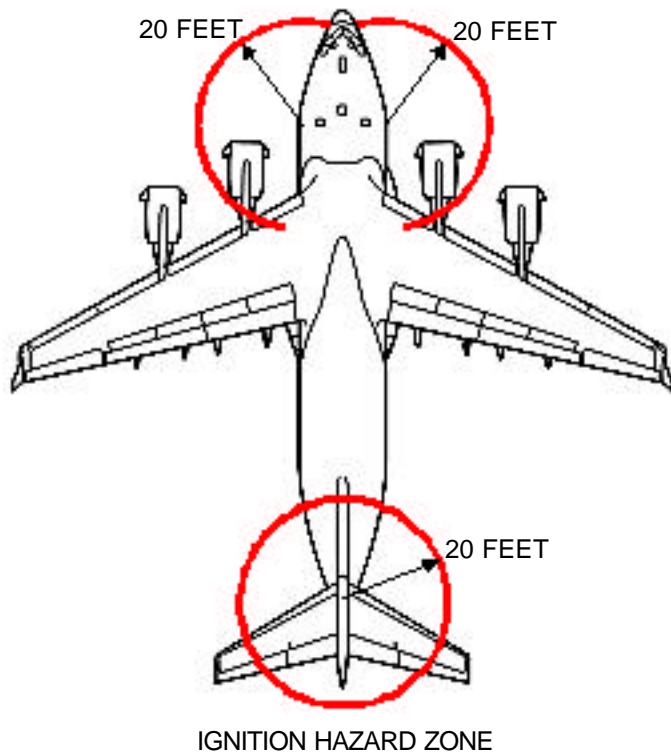
HAZARD DISTANCE SUMMARY FOR IRCM LASER TABLE

Wavelength	Hazard Type	Exposure Duration (sec)	Unaided Viewing (meters) [ft]	7 x 50 mm Binocular (meters) [ft]	8 cm Binocular (meters) [ft]	12 cm Telescope (meters) [ft]
Multiple (Single SLTA)	Intra-Beam Viewing NOHD	10	40 [132]	185 [607]	296 [971]	445 [1,460]
	Skin NSHD	10	40 [132]	N/A	N/A	N/A
Multiple (Two of Three SLTAs)	Intra-Beam Viewing NOHD	10	57 [187]	263 [863]	420 [1,378]	629 [2,064]
	Skin NSHD	10	57 [187]	N/A	N/A	N/A
NOHD - Nominal Optical Hazard Distance						
NSHD - Nominal Skin Hazard Distance						

NOTE:








The distances defined in the Table (Hazard Distance Summary for IRCM Laser) on page C-17A.7 will define the Laser Hazard Zone. Distances shown will be measured on the ground from each operational SLTA as indicated (i.e. from directly below each Forward SLTA and from directly below the Aft SLTA). The 20-foot distance shown does not consider the height of the SLTA.

THREE SLTA CONFIGURATIONS (Not to Scale)



AIRFRAME MATERIALS

C-17A

-  a. Aluminum Alloy
-  b. Carbon/Epoxy
-  c. Carbon/Kevlar/Epoxy
-  d. Glass Fiber Reinforced Plastic
-  e. Kevlar/Foam Core
-  f. Kevlar/Nomex
-  g. Carbon/Nomex

NOTE:

Many interior nonstructural parts (e.g., liners, troop seats) are also made of composite materials.

NOTE:

There are 4 flap track fairings for each wing using Kevlar/Nomex.

NOTE:

The fuselage and wing are constructed primarily of aluminum alloy material. However, aluminum, lithium, titanium, steel, and composite materials are used wherever there are cost-effective advantages in weight, fatigue life, or corrosion resistance.

NOTE:

As many as 20 "must cost" structural changes have taken place since production of P-1. A significant change is the center portion of the horizontal stabilizer that has been changed from aluminum (pictured at right) to graphite epoxy to carbon epoxy (see page C-17A.3). The cargo door and main landing gear pods now include composite materials. The slats are a mixture of aluminum and titanium.

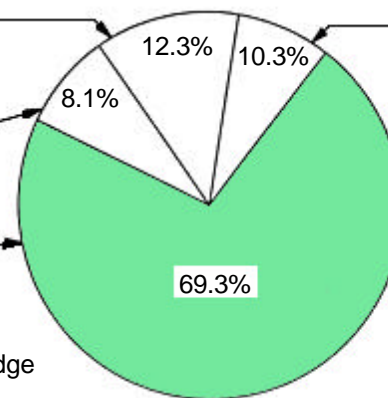
STEEL/SUPERALLOYS

- Landing Gear
- Core Exhaust & Thrust Reverser

COMPOSITES

ALUMINUM ALLOY

- Cargo Ramp & Door
- Fuselage Shell & Floor Planks
- Wing, Vertical & Horizontal Stabilizer Boxes, & Leading Edge Structure



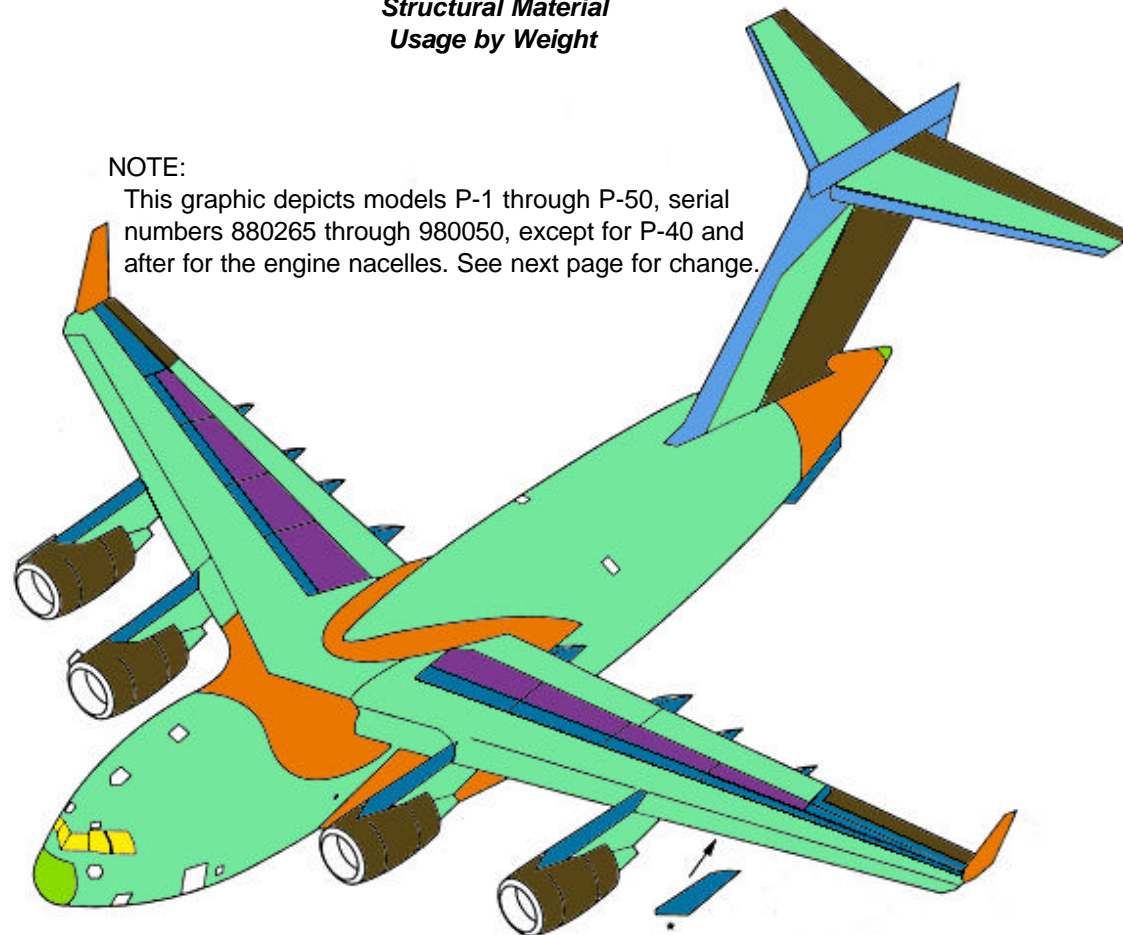
TITANIUM

- Fuselage Tear-Stopppers
- Slat Tracks
- Firewalls
- Fasteners
- Hydraulic Tubing
- Pylon Lower Spar Cap & Web
- Core Exhaust & Thrust Reverser
- Horizontal Stabilizer Pivot Structure

Structural Material Usage by Weight








NOTE:

This graphic depicts models P-1 through P-50, serial numbers 880265 through 980050, except for P-40 and after for the engine nacelles. See next page for change.



AIRFRAME MATERIALS

C-17A

-  a. Aluminum Alloy
-  b. Carbon/Epoxy & Syncore
-  c. Carbon/Epoxy
-  d. Fiberglass/Epoxy & Fiberglass Core
-  e. Fiberglass/Epoxy, Kevlar Epoxy & Nomex
-  f. Carbon & Nomex
-  g. Carbon/Bismaleimide & Phenolic

STEEL/SUPERALLOYS

- Landing Gear
- Core Thrust Reverser

COMPOSITES

ALUMINUM ALLOY

- Cargo Ramp & Door
- Fuselage Shell & Floor Planks
- Wing /Vertical Stabilizer Boxes
- Wing Leading Edge Structure
- Horizontal Stabilizer Center Box
- Outboard Box Ribs

**Structural Material
Usage by Weight**

TITANIUM

- Fuselage Tear - Stoppers
- Slat Tracks, Slat Skins (partial)
- Firewalls
- Fasteners
- Hydraulic Tubing
- Pylon Lower Spar Cap and Web
- Fan Thrust Reverser
- Horizontal Stabilizer Pivot Structure
- Flap Skin (partial) and Trailing Edge
- Hinge Fittings - Control Surfaces and Forward Feg
- Flex Angle - Wing Lower Skin to
- Fuselage Spindles - Cargo Door & Ramp
- Straps - Wing Upper Cover to Pylon Stub

NOTE:

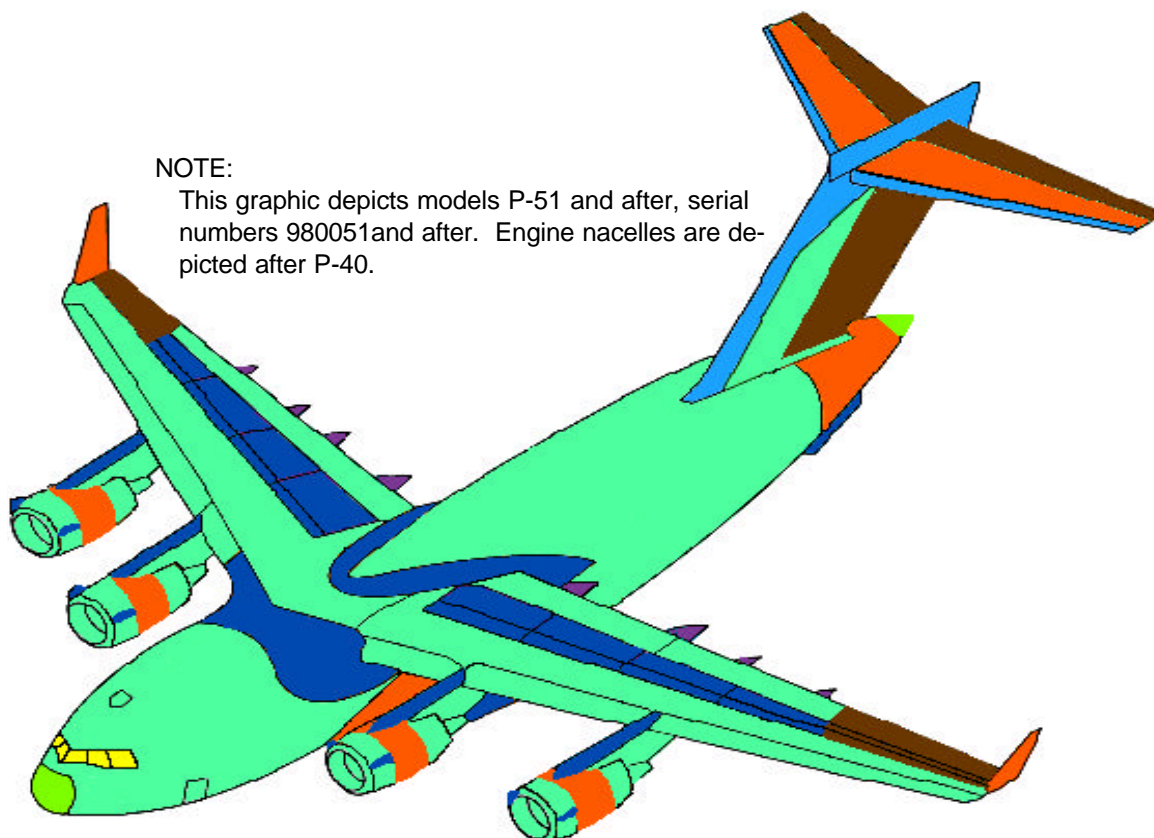
The fuselage and wing are constructed primarily of aluminum alloy material. Titanium, steel, and composite materials are used wherever there are cost-effective advantages in weight, fatigue life, or corrosion resistance. Many interior nonstructural parts (e.g., liners, troop seats) are also made of composite materials.

NOTE:

The horizontal stabilizer torque box is being installed on later production models and will not be a retrofit for earlier models. P-1 thru P-50, on page C-17A.2, has aluminum skins, spars and ribs. P-51 and after, on this page, will have graphite/epoxy skins, spars and aluminum ribs. The material is AS4 fibers and 3501-6 epoxy. The landing gear on all models is 300M steel.

NOTE:

The engine nacelles after P-40 have aluminum on the forward and aft sections. The center is carbon/epoxy. This change is reflected in the graphic.



NOTE:

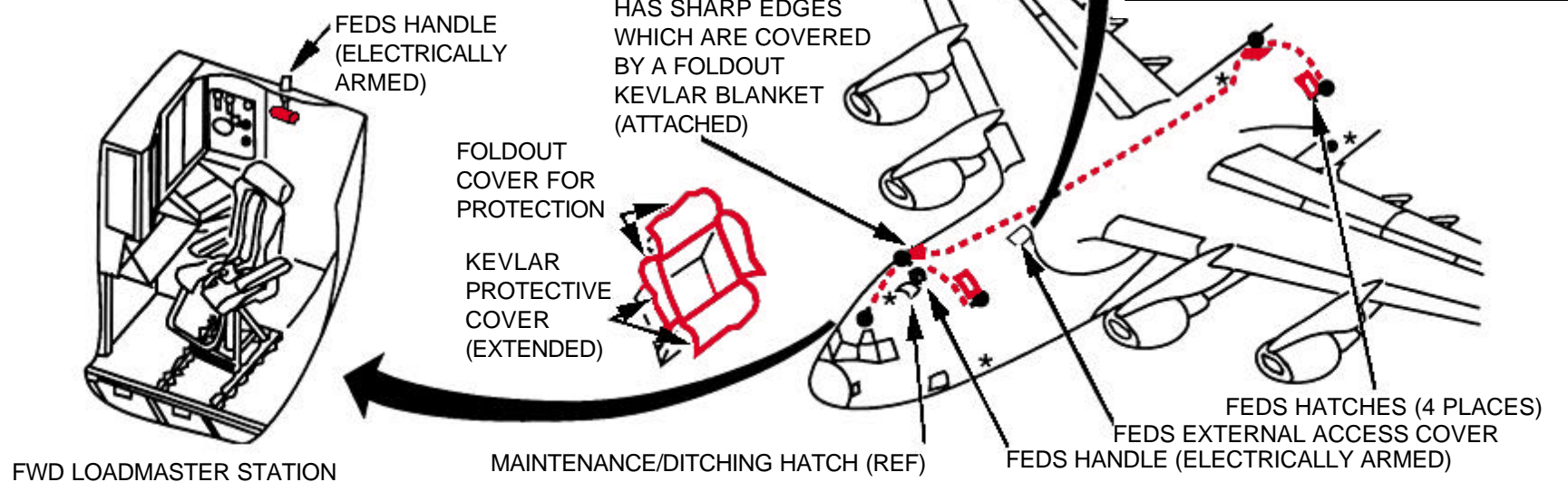
This graphic depicts models P-51 and after, serial numbers 980051 and after. Engine nacelles are depicted after P-40.

FLOTATION EQUIPMENT DEPLOYMENT SYSTEM (FEDS)

NOTE:

- FEDS is a ditching egress system incorporating four pyrotechnically produced hatch openings. Containerized life rafts are automatically ejected from three of the openings (forward: left and right; aft - right). Each raft automatically inflates after ejection and remains attached to the aircraft with a tether.
- FEDS hatches are not to be used for external entry, and are not emergency cut-in areas.
- The external FEDS initiator handle is located on the upper fuselage, left side, forward of the wing root. To activate FEDS with the external initiator handle.

- Release access cover quick release latches (3 places) and open cover.
- Pull ring to remove initiator safety pin.
- Turn handle 90 degrees and pull.
- Place attached kevlar covers over cut edges for personnel evacuation.



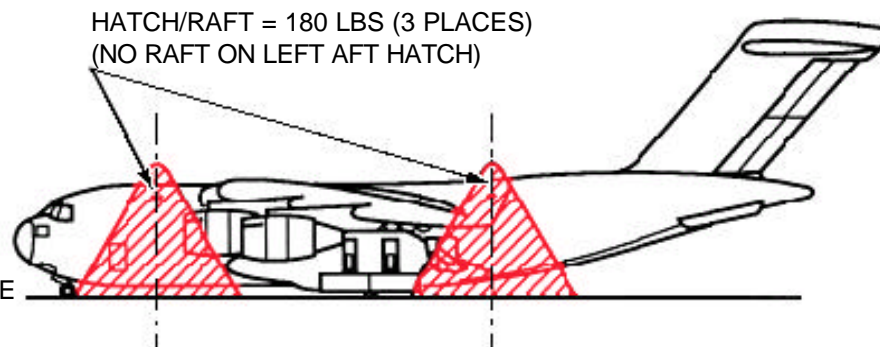
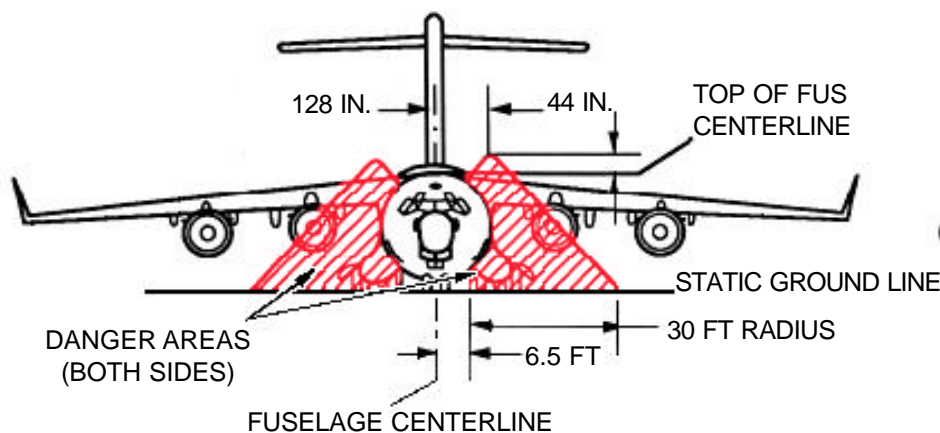
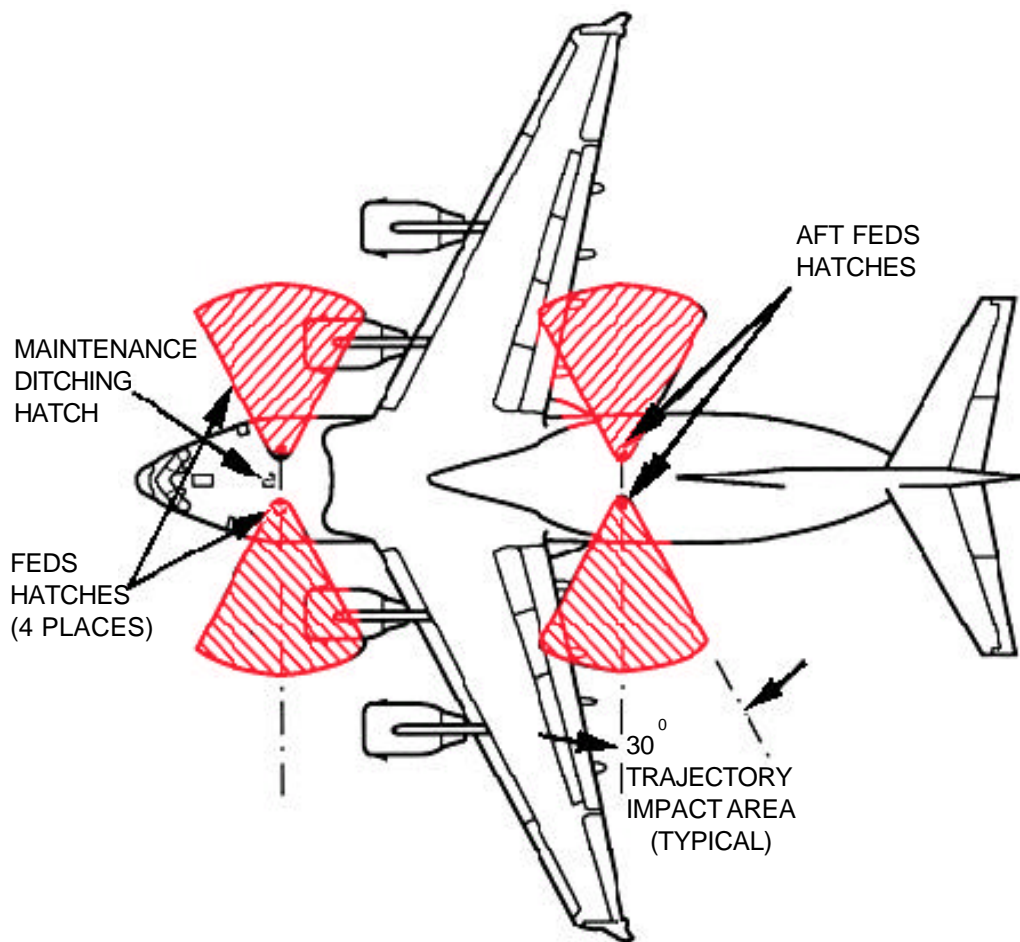
FEDS HAZARD AREA

WARNING

To avoid possible injury or death, rescue personnel should remain clear of FEDS hatch impact areas depicted as shaded areas in all views.

NOTE:

- When hatch is jettisoned, a raft is attached by a 36 foot line on three of the four hatches. In a water ditching situation, the raft line will detach as aircraft submerges.
- The raft container being a loose item, after separation, is not accounted for.



C-17A

AIRCRAFT HYDRAULIC SYSTEMS

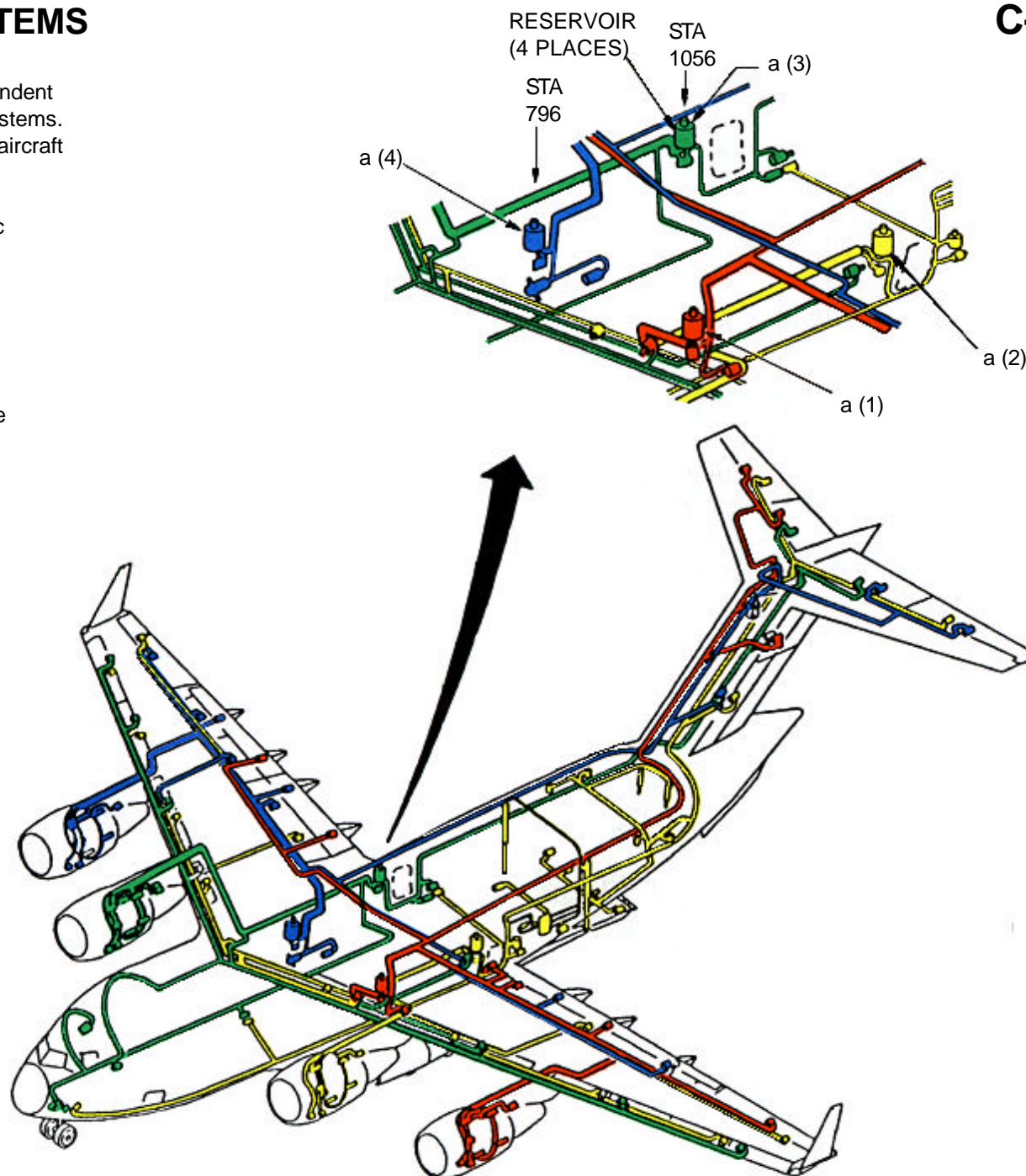
NOTE:

Hydraulic power supply consists of four independent continuously operating 4000 psi pressurized systems. Four individual hydraulic systems network the aircraft as indicated.

- a. Each of the four system reservoirs have specific hydraulic fluid quantities:
 - (1) System 1 - 11.1 gallons.
 - (2) System 2 - 18.5 gallons.
 - (3) System 3 - 13.5 gallons.
 - (4) System 4 - 11.1 gallons.
- b. Four main system reservoirs are mounted above aircraft centerline at stations 796.0 and 1056.1, two reservoirs on each side.

LEGEND

- HYDRAULIC SYSTEM NO. 1
- HYDRAULIC SYSTEM NO. 2
- HYDRAULIC SYSTEM NO. 3
- HYDRAULIC SYSTEM NO. 4



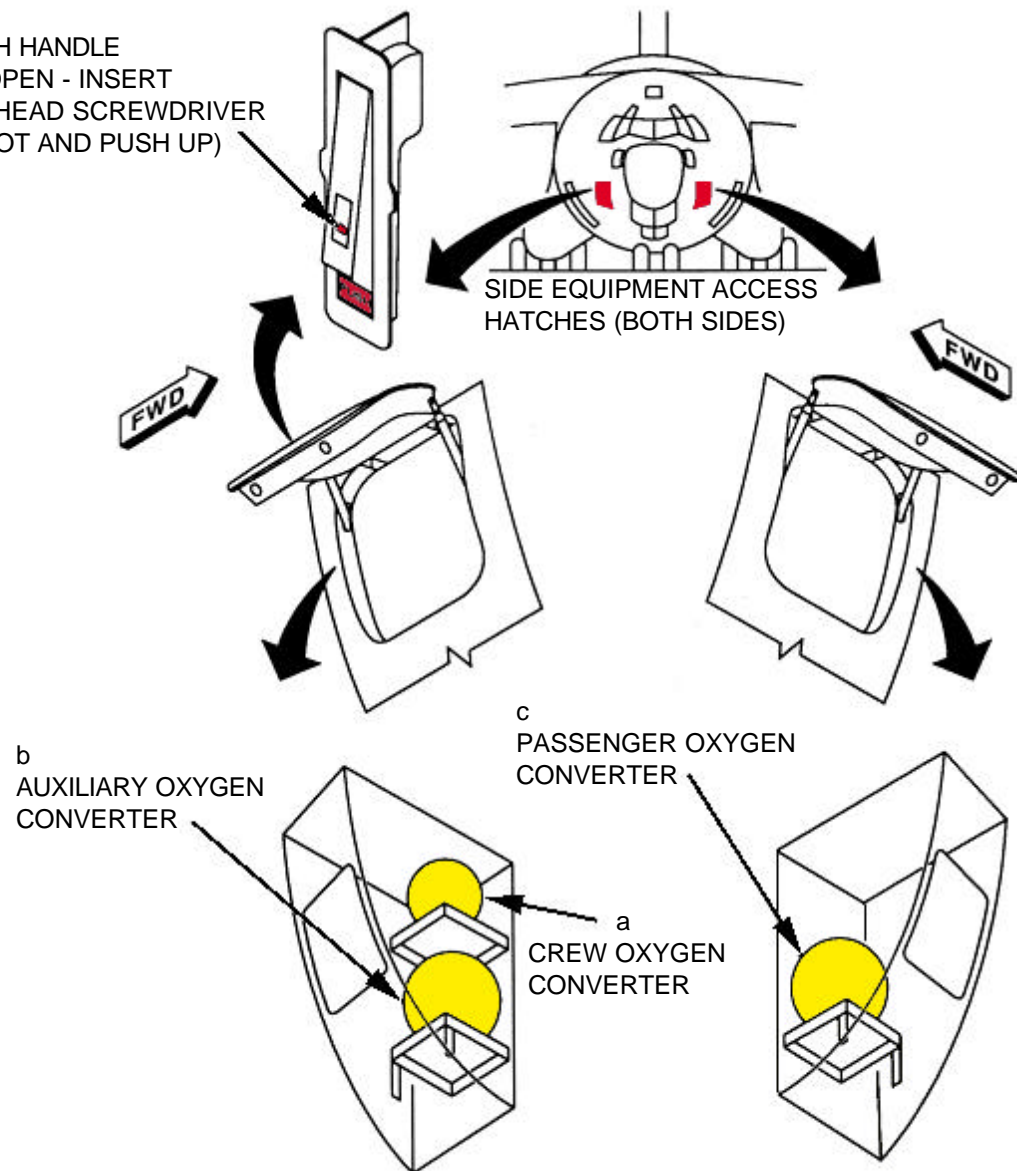
AIRCRAFT OXYGEN SYSTEM LOCATIONS

NOTE:

The aircraft oxygen system consists of three separate oxygen converters located approximately eight feet above ground level.

- The crew oxygen system consists of one 25 liter converter located in the right nose compartment. (Minus 87-0025, 88-0265, and 88-0266.)
- The auxiliary converter (75 liters) is also located in the right nose compartment directly below the crew converter.
- The passenger converter (75 liters) is located in the left nose compartment opposite the crew converter. Access is similar to crew and the auxiliary converter inside a protective shroud. (Minus 87-0025, 88-0265, and 88-0266.)

LATCH HANDLE
(TO OPEN - INSERT
FLATHEAD SCREWDRIVER
IN SLOT AND PUSH UP)



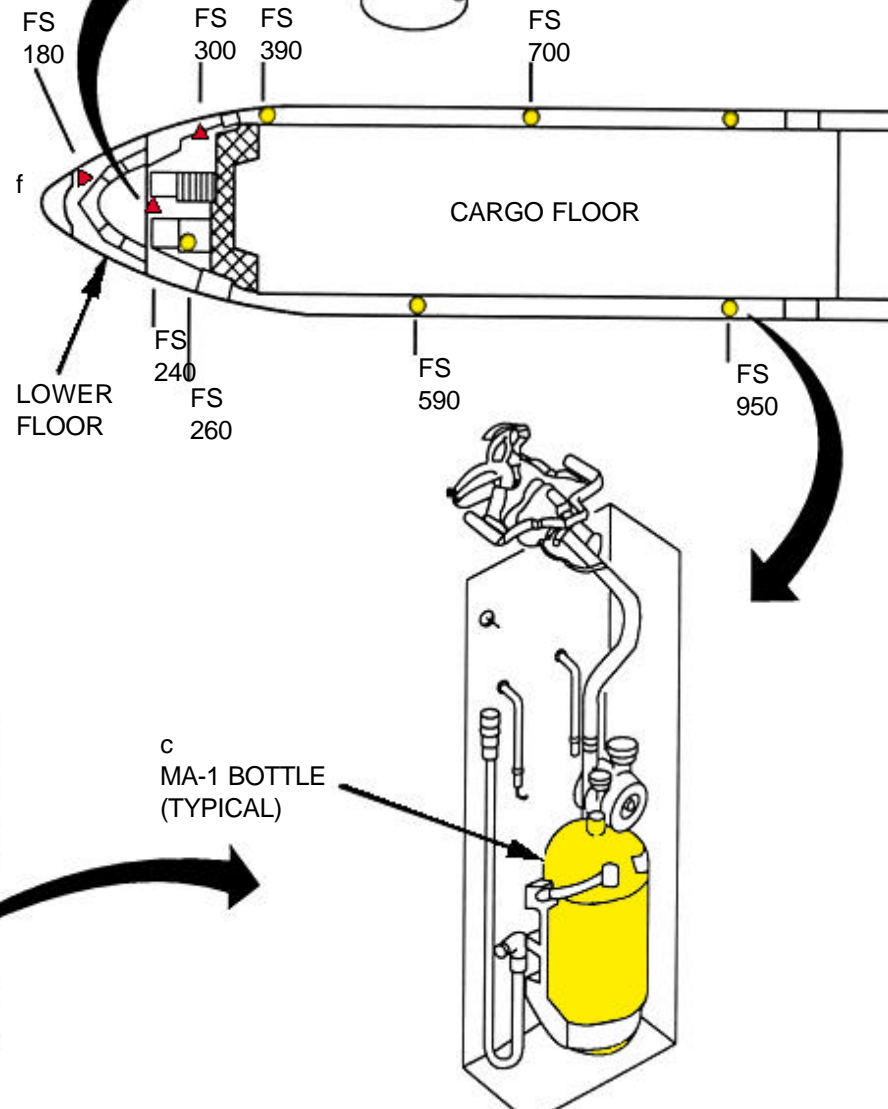
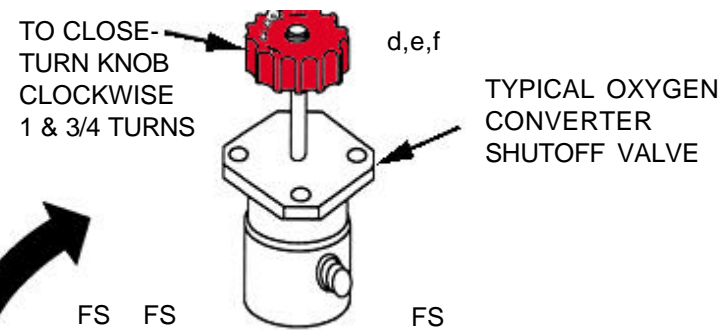
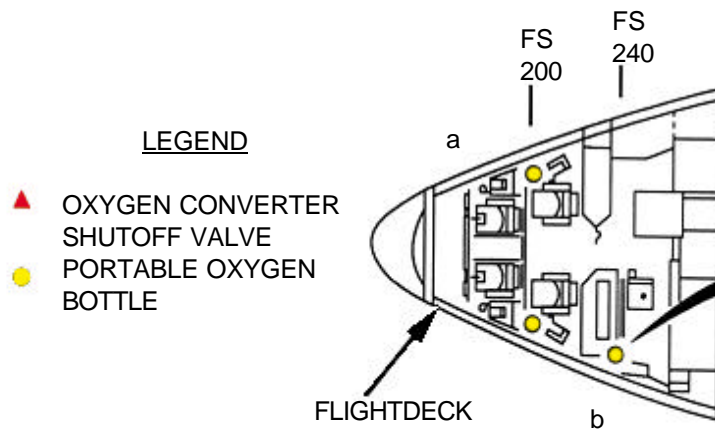
AIRCRAFT OXYGEN SYSTEM LOCATIONS-Continued

- d. The auxiliary oxygen system manual shutoff valve is located at the forward loadmaster station, FS 300.
- e. The passenger converter manual shutoff valve is located forward of the galley at FS 400.
- f. The crew oxygen converter manual shutoff valve is located on the co-pilot's console at FS 180.

AIRCRAFT PORTABLE OXYGEN SYSTEM LOCATIONS

Nine portable oxygen bottle units are installed as follows:

- a. Two in the flightdeck, left and right side FS 200.
- b. One in the crew rest area, left side, FS 240.
- c. One in the lavatory, FS 260. Five in the cargo compartment, right side, FS 390, left side, FS 590, right side, FS 700, left and right side FS 950. Locations are approximate.



C-17A

ONBOARD INERT GAS GENERATING SYSTEM (OBIGGS-LEGACY)

NOTE:

OBIGGS generates Nitrogen Enriched Air (NEA) for use in the fuel tanks. The NEA is used to keep fuel vapors in the fuel tank wing (ullage) areas inert (below the ignition point) during all phases of operation except refueling. The OBIGGS functions automatically.

NOTE:

OBIGGS switch controls are located on the overhead panel within the flight compartment for flight activity. Ground operation of this system is controlled through a panel located on the maintenance monitor system located near the forward loadmaster station.

- a. Two identical half systems consisting of two sets (4 cylinders each) are located under the cargo floor at station 708.5. Each cylinder is isolated by check valves and has a thermal fuse, burst disc and storage relief valve which will open if system pressure is exceeded.
- b. The OBIGGS inert panel is located on the pilot's overhead panel. Shutting both inboard engines down will eliminate No. 2 and No. 3 hydraulic pressure to compressor motors causing automatic OBIGGS system shutdown. Additionally, the inert panel FAIL lights will illuminate.

ONBOARD INERT GAS GENERATING SYSTEM (OBIGGS II)

NOTE:

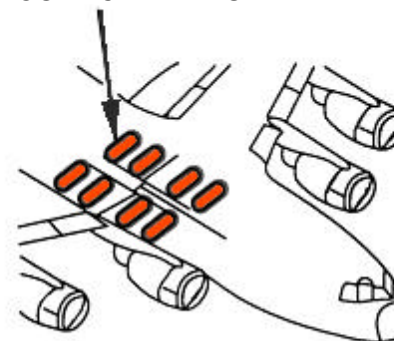
The OBIGGS II System NEA is generated by passing pressurized air through permeable membrane fibers that permit oxygen molecules to vent overboard leaving the air stream enriched with nitrogen. The OBIGGS II eliminates the need for cylinders and is comprised of two identical independent half-systems (one on each side of the aircraft) that are interconnected. Each system is supplied by the ECS bleed air manifold that supplies the air conditioning packs and anti-icing systems. Bleed air from the engines, APU, or a ground cart is required for the OBIGGS to operate. Each system contains a boost compressor, temperature control, filter, a set of air separation modules, and the valves and ducting to supply NEA to both the fuel tanks and vent system. Each system supplies NEA to the tanks on the same side of the aircraft.

NOTE:

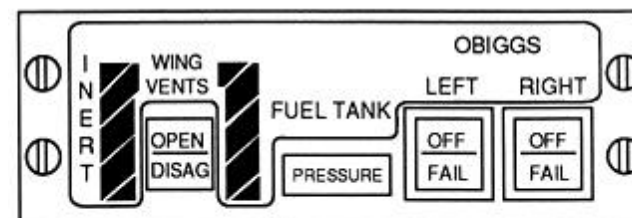
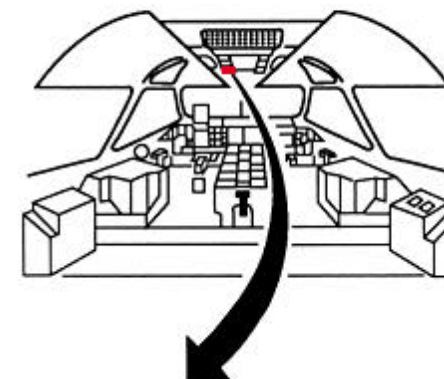
OBIGGS operation is completely automatic. The OBIGGS switches on the cockpit overhead panel are normally on, but can be manually selected off. The Maintenance Monitor Panel in the forward cargo compartment next to the cockpit stairs is used for ground operation.

C-17A

a
NITROGEN CYLINDERS



b
PILOTS OVERHEAD PANEL



b
OBIGGS INERT PANEL

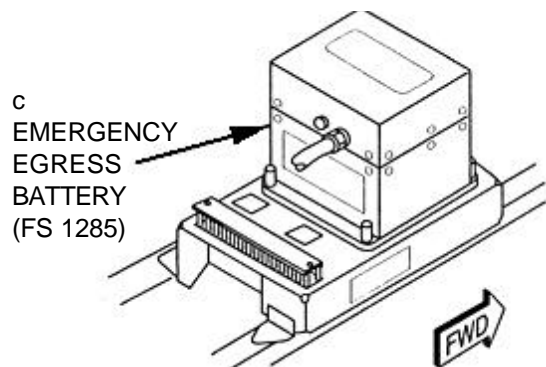
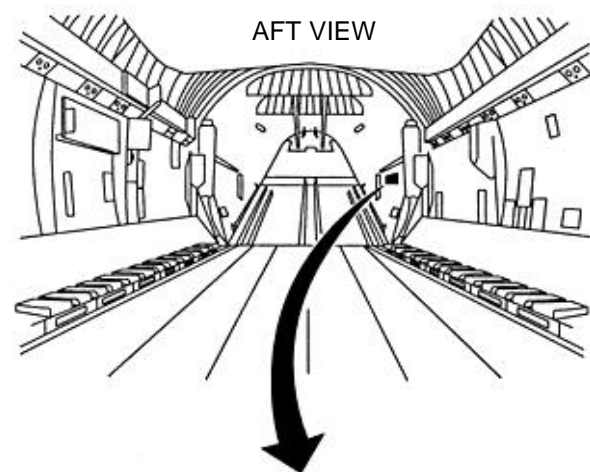
AIRCRAFT BATTERY LOCATIONS

C-17A

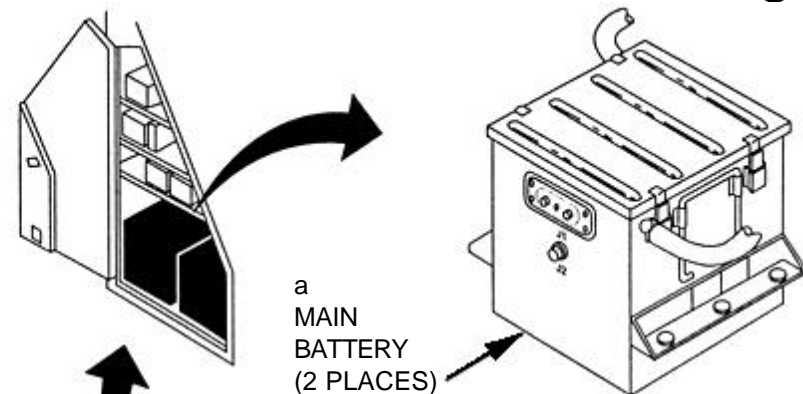
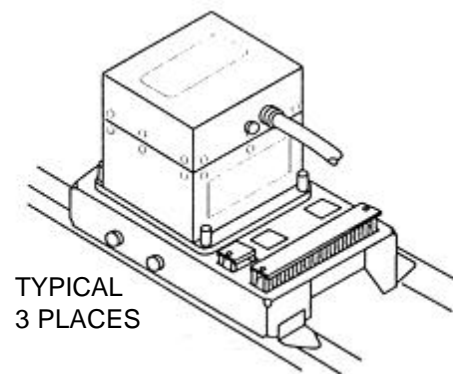
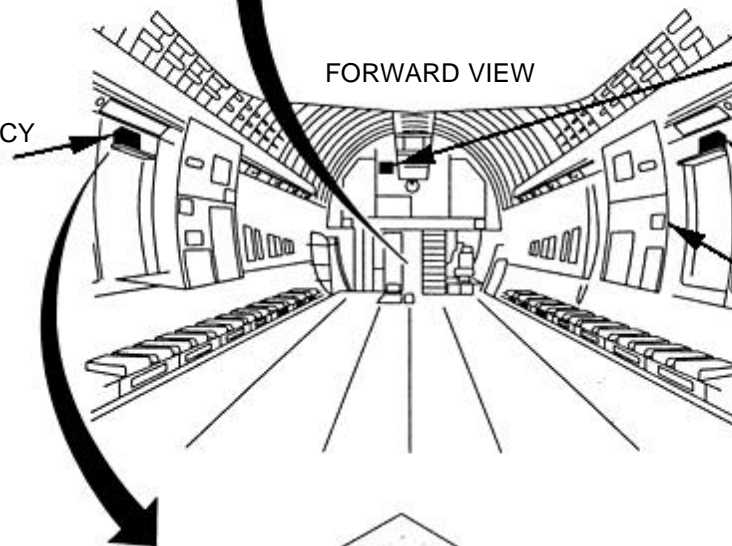
CAUTION

To avoid possible injury, rescue personnel should remain clear of FEDS hatch lighting batteries located on the forward bulkhead near the catwalk and on the right and left side of the cargo compartment at FS 750 (behind panel).

- a. Aircraft main batteries are located under the flightdeck entrance stairwell in lower portion of storage cabinet.
- b. Emergency lighting batteries are located on the forward bulkhead near the catwalk and on the right and left side of the cargo compartment at FS 750.
- c. Emergency egress battery is located aft of the left troop at FS 1285 (behind panel).



b
EMERGENCY
LIGHTING
BATTERY
(FS 750)



b
EMERGENCY
LIGHTING
BATTERY

b
EMERGENCY
LIGHTING
BATTERY
(FS 750)

ACCESS COVER
(BOTH SIDES)

SPECIAL TOOLS/EQUIPMENT

35 Ft Extension Ladder, "A" Frame Ladder,
Flathead Screwdriver for Oxygen Access,
Power Rescue Saw, Portable Lights, Fire Drill II

C-17A

AIRCRAFT ENTRY

WARNING

Opening any aircraft door
under pressurized conditions
will injure or cause death to
rescue personnel. Do not
open any door until this
condition does not exist!

CAUTION

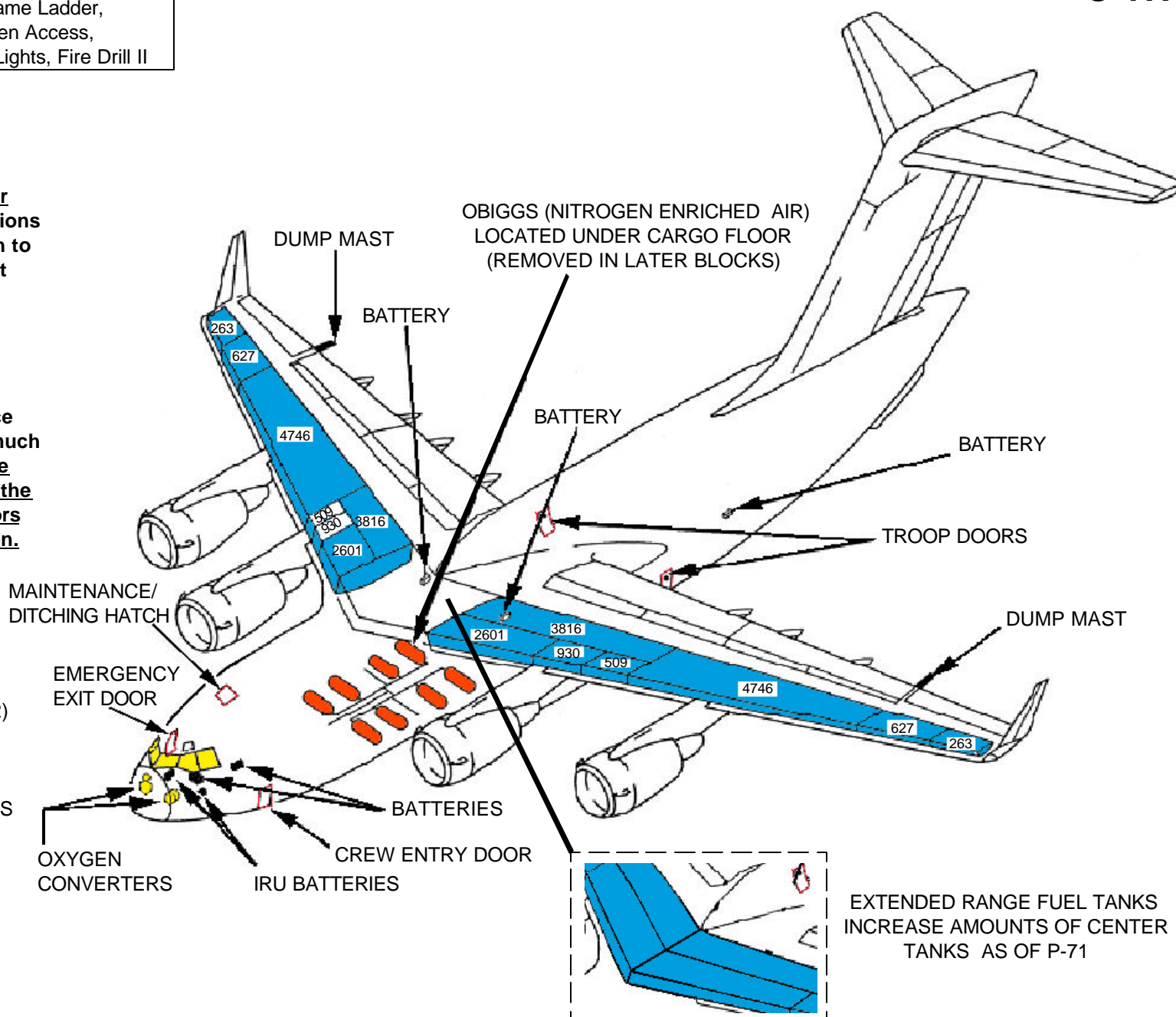
During training or practice
scenarios, exerting too much
pressure when raising the
troop doors will damage the
door up-stops. These doors
require little force to open.

NOTE:

Seat capacity depends
on cargo bay configuration
for passengers or litters.
Maximum Crew Seats (7)
Maximum Passengers (102)
Maximum Litters (48)

NOTE:

Fuel Information in US GALS
Total Fuel : 29,984
Fuel Type: JP-8



AIRCRAFT ENTRY-Continued

C-17A

1. CREW ENTRY DOOR

WARNING

DO NOT open any door to this aircraft until it has been depressurized. Any attempt to open a door can result in injury or death to personnel attempting to do so. Door(s) will blow outward under pressure when unlocked or jimmied.

NOTE:

The crew entry door is located on the left side of the aircraft forward of the wing.

a. EXTERNAL OPERATION

- (1) Push small flap door next to door locking handle to grip handle. Pull out door locking handle to retract locking pins.
- (2) Depress release lever, located next to door unlatching handle, and simultaneously pull out on unlatching handle until the release lever engages the detent to lift door over stops.
- (3) Pull down on door with locking handle until retractable lower step sets on ground.

NOTE:

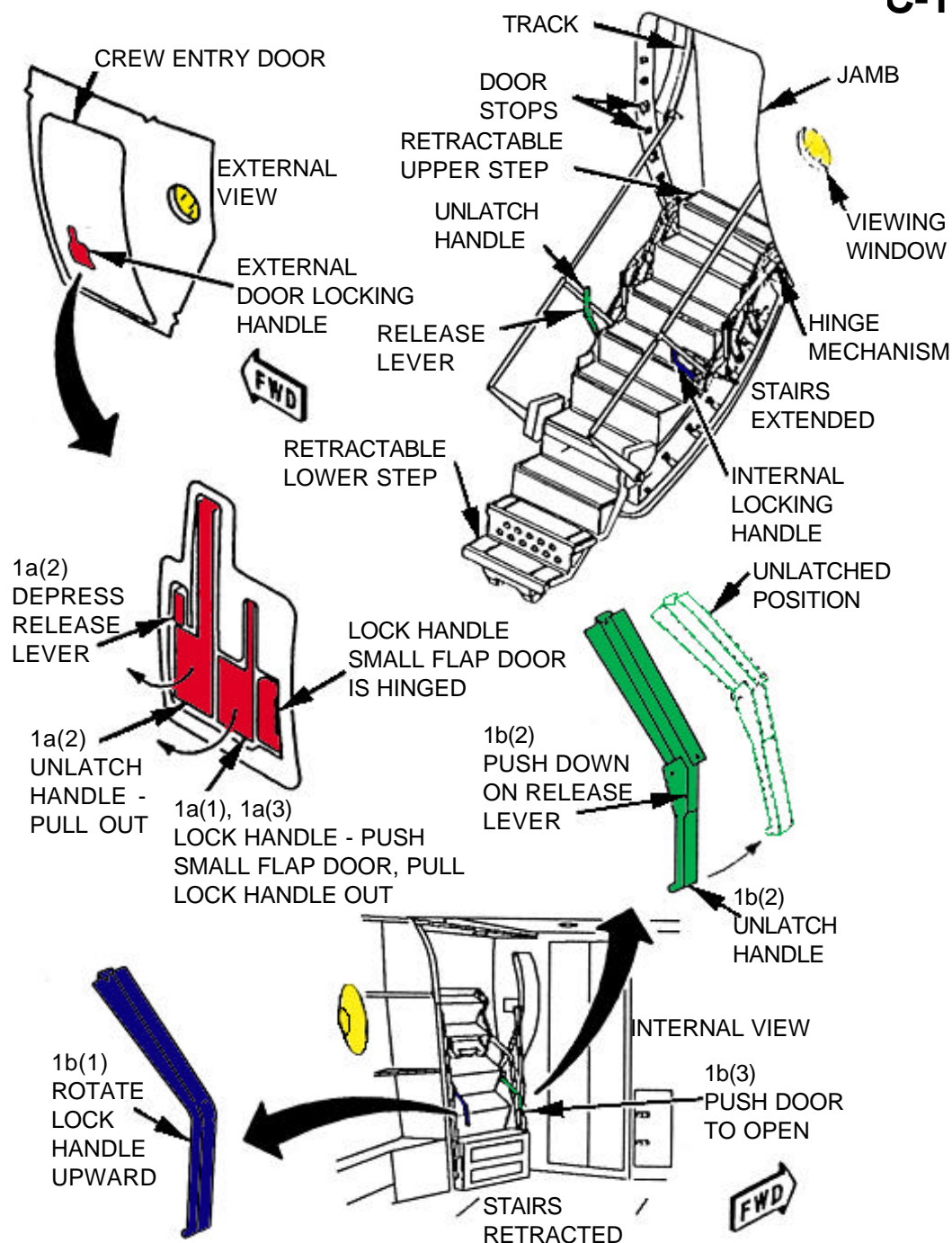
Door is counterbalanced to prevent free fall.

b. INTERNAL OPERATION

WARNING

To prevent personnel injury or damage to the door, visually clear the outside area using the viewing window adjacent to the door.

- (1) The blue door lock handle is located adjacent to left door railing. Raise lock handle upward to unlock door.
- (2) The green door latch handle is located adjacent to right door railing. Depress the thumb release and lift the latch handle to full up to lift door off stops.
- (3) Push door open. Door will open by its own weight. To extend steps, push up and out on handrails.



AIRCRAFT ENTRY-Continued

C-17A

1c. MODIFIED CREW ENTRY DOOR EXTERNAL OPERATION

NOTE:

The C-17 fleet underwent a modification to the crew entry door. The fleet is 100% completed. This modification affects the external unlocking and opening of the crew entry door by the use of a new larger inside release lever and outside lock handle secured by a new flap door located at the bottom portion of the crew entry door. Also the door, inside handles, and handrails have been changed.

WARNING

Coordinate with the flight deck to verify that pressure is zero, outflow valve is full open, and an additional exit is open prior to opening crew entry door. Failure to comply could cause personnel injury/damage to the aircraft. Do not stand in front of crew entry door.

NOTE:

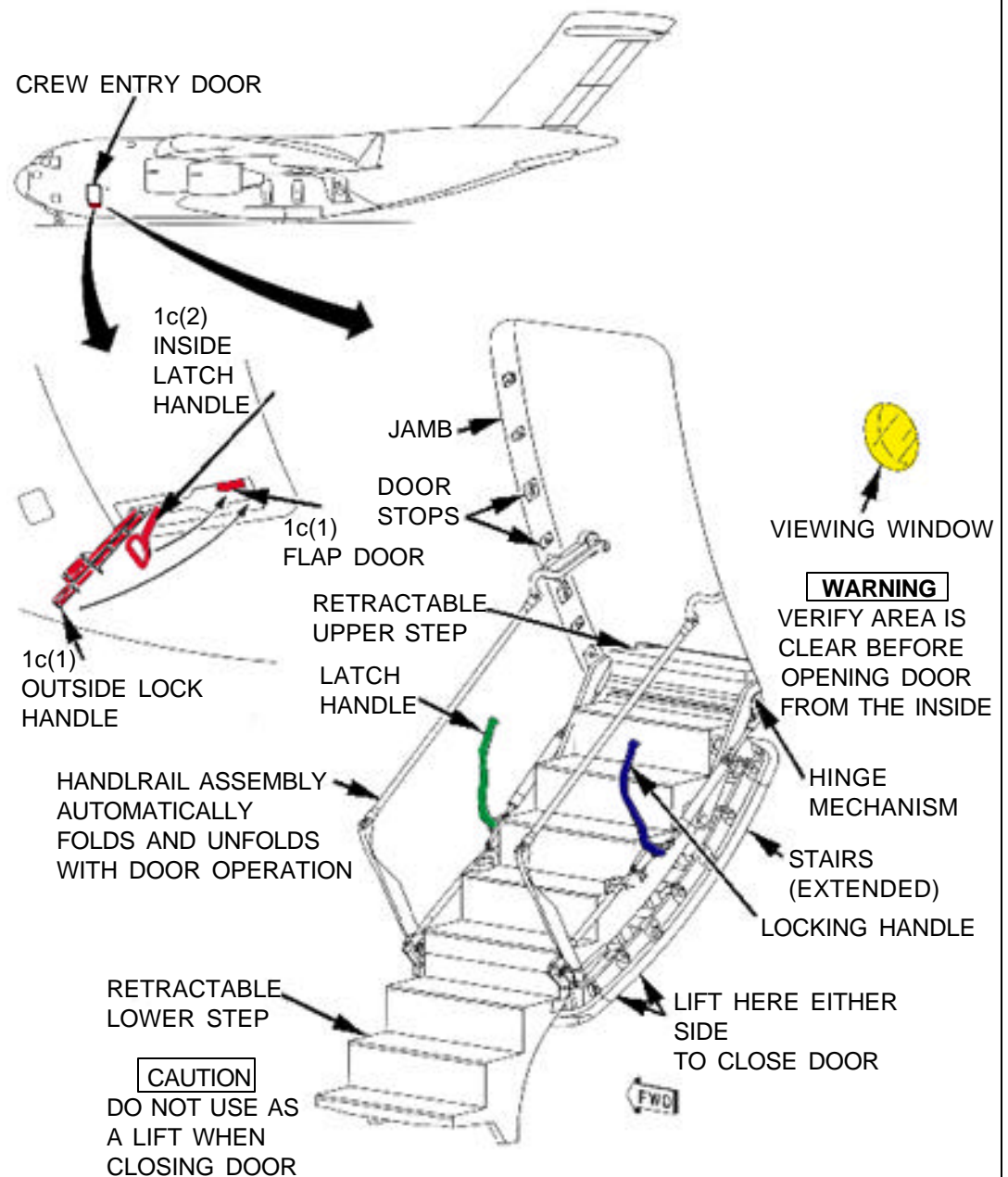
The crew entry door is located on the left side of the aircraft forward of the wing.

- (1) To unlock - Push flap door and pull up on outside lock handle.
- (2) To unlatch - Push the release lever and pull out on the inside latch handle.

CAUTION

Do not apply a load on the crew door when the retractable lower step is not supported. It is permissible for a crewmember to enplane/deplane using the crew door to position a support. No weight restrictions apply. Failure to comply may cause damage to the aircraft.

- (3) Pull down on the door until the steps rest on the ground. Door opens outward from the top. Door is hinged at the bottom and counterbalanced to enable one person to open or close the door.



AIRCRAFT ENTRY-Continued

C-17A

2. FLIGHTDECK ACCESS DOOR

NOTE:

A flightdeck access door is located above the flightdeck stairwell leading from the cargo compartment into the flightdeck area.

- a. If the access door is in the closed position, pull down on latch release and push door upward and secure against access door handrail retainer.

3. TROOP DOOR

CAUTION

During training or practice scenarios, exerting too much pressure when raising the troop doors will damage the door up-stops. These doors require little force to open.

NOTE:

A troop door is located on the left and right side of the aircraft aft of the wing root. The doors are 43 inches wide by 80 inches high and weigh approximately 195 pounds each. The doors are counterbalanced to assist in opening and closing.

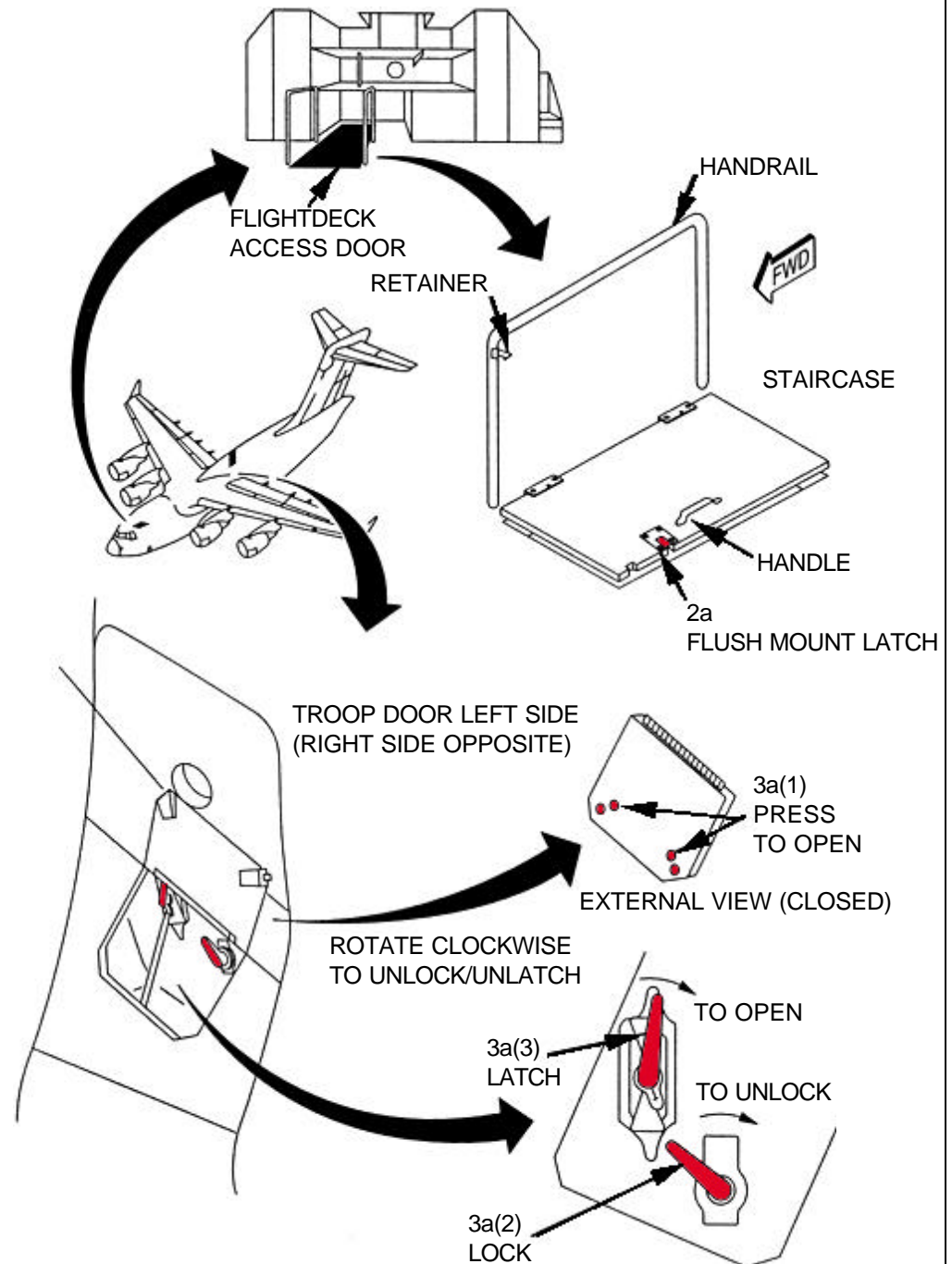
a. EXTERNAL OPERATION

- (1) Open troop door control access cover, located under door window, by pressing the two push buttons to quickly release the cover latches.

NOTE:

On the left side of the aircraft outside handles rotate clockwise to unlock and unlatch. On the right side of the aircraft outside handles rotate counterclockwise to unlock and unlatch.

- (2) Rotate locking handle, the lower right smaller handle, to the unlock position.
- (3) Rotate latching handle, the upper left larger handle, to the unlock position.



AIRCRAFT ENTRY-Continued

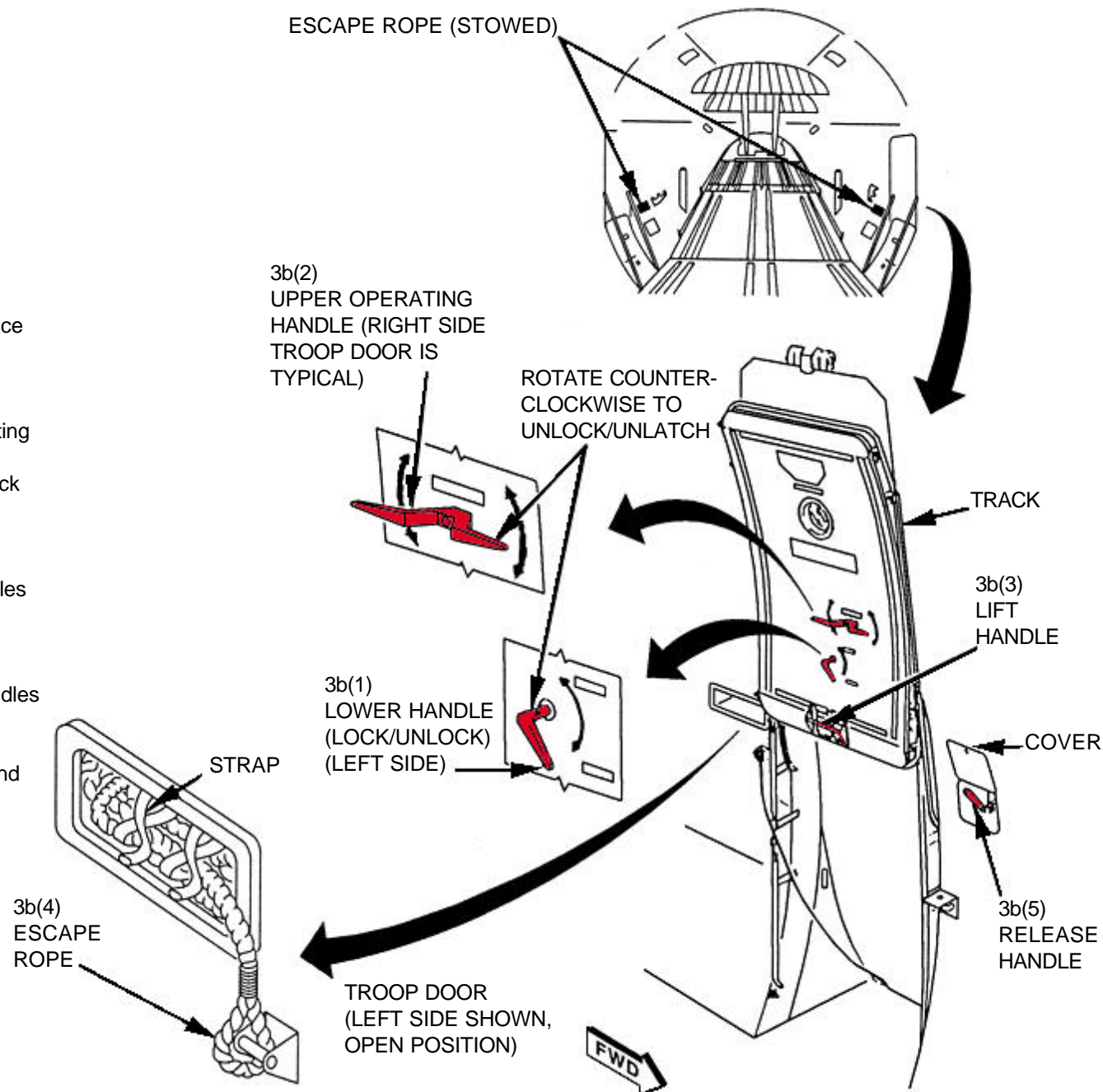
C-17A

3b. INTERNAL OPERATION

- (1) To open: Rotate the lock/unlock handle counterclockwise, lower small handle in center of door, to unlock position.
- (2) Rotate operating handle, located above lock/unlock handle, and raise door until the door is held in the uplock.
- (3) Use lift handle to raise door.
- (4) Pull escape rope from container and place outside door frame for egress.
- (5) To close: Push up on door, pull release handle, lower door. Depress the operating handle release pushbutton and rotate operating handle. Rotate the lock/unlock handle clockwise to lock the door.

NOTES:

- On the left side of the aircraft inside handles rotate counterclockwise to unlock and unlatch.
- On the right side of the aircraft inside handles rotate clockwise to unlock and unlatch.
- Normal height from troop door sill to ground is approximately 5' 3".



AIRCRAFT ENTRY-Continued

C-17A

4. FORWARD EMERGENCY ESCAPE DOOR

NOTE:

The forward emergency escape door is located on right side of aircraft opposite crew entry door.

a. EXTERNAL OPERATION

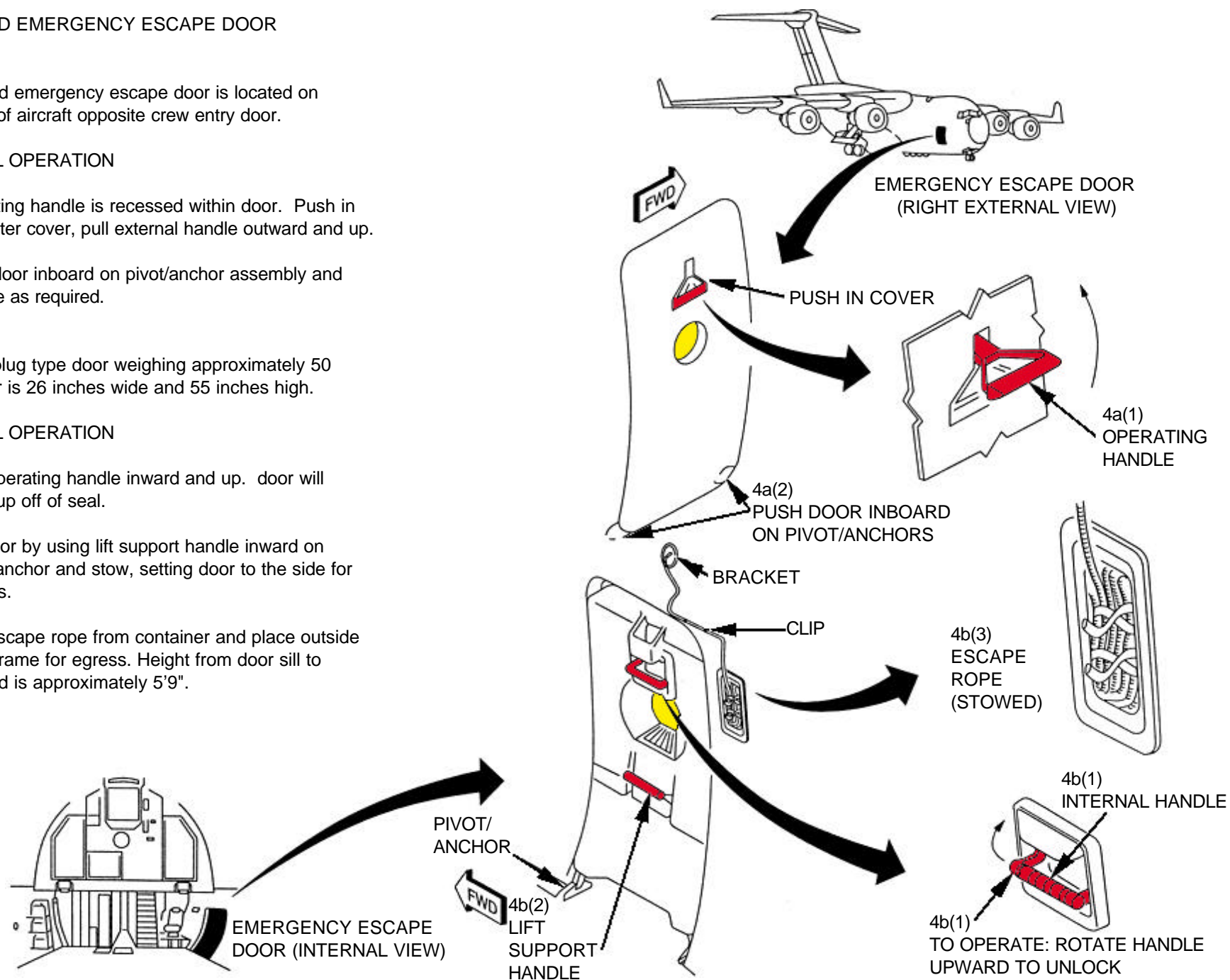
- (1) Operating handle is recessed within door. Push in on center cover, pull external handle outward and up.
- (2) Push door inboard on pivot/anchor assembly and remove as required.

NOTE:

This is a plug type door weighing approximately 50 lbs. Door is 26 inches wide and 55 inches high.

b. INTERNAL OPERATION

- (1) Pull operating handle inward and up. door will raise up off of seal.
- (2) Lift door by using lift support handle inward on pivot/anchor and stow, setting door to the side for egress.
- (3) Pull escape rope from container and place outside door frame for egress. Height from door sill to ground is approximately 5'9".



AIRCRAFT ENTRY-Continued

C-17A

5. CARGO RAMP BLOWDOWN SYSTEM

NOTE:

The ramp blowdown system is used to rapidly open the ramp and provide area lighting for aero-medical evacuation. The ramp blowdown system is deployed from either the forward or aft loadmaster's control panel, left side. Each control consists of two red guarded switches.

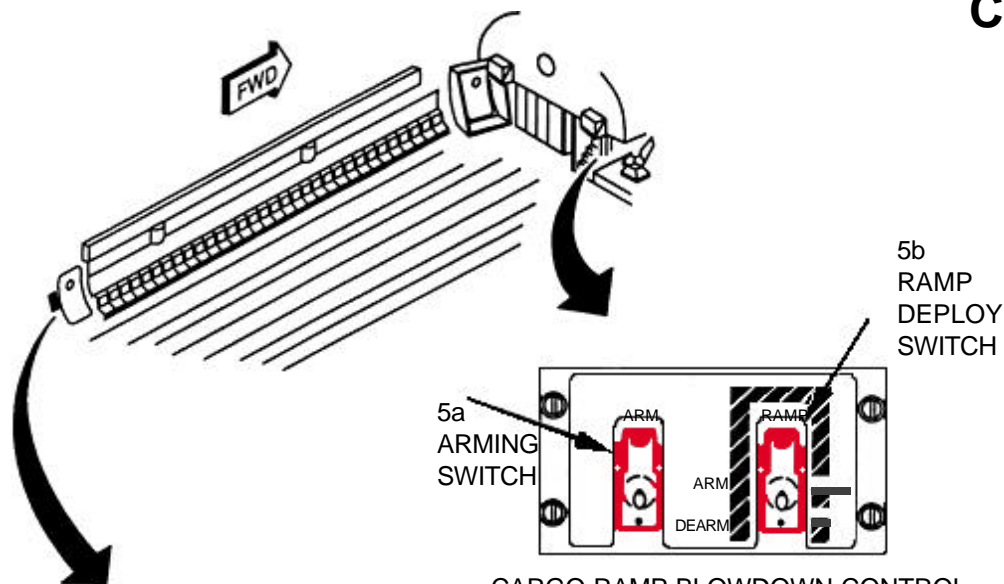
- To initiate Blowdown sequence, raise the red guard and place arming switch to the armed position and hold.
- Raise red guard on ramp deploy activator, place and hold switch in deploy position until ramp deploys.
- The cargo ramp will automatically deploy to the full down position. Emergency cargo ramp lights will illuminate to aid in evacuating the aircraft.

WARNING

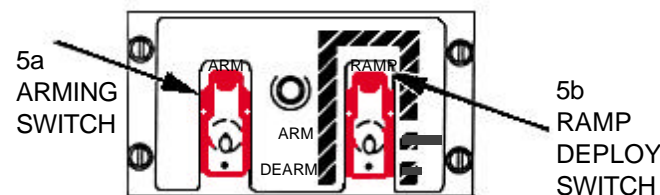
- To prevent personnel injury and damage to equipment, ensure that personnel and equipment are clear prior to operating ramp.
- When initiating ramp blowdown, the cargo door may be locked in the down position. If cargo is centered loaded in the down position. If cargo is center loaded on cargo ramp, evacuate litter personnel down either side of ramp. Cargo ramp toes will have been removed to facilitate evacuation of medical personnel.

NOTE:

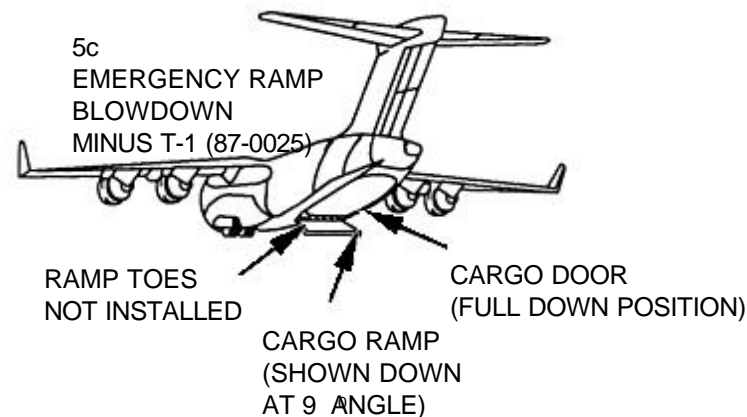
The cargo door in the closed position allows for a vertical opening of 66 inches at centerline to 78 inches at outer edges.



CARGO RAMP BLOWDOWN CONTROL
(FWD LOADMASTER STATION)



CARGO RAMP BLOWDOWN CONTROL
(AFT LEFT LOADMASTER PANEL)



AIRCRAFT ENTRY-Continued

6. EMERGENCY CUT-IN

NOTE:

Emergency cut-in areas are provided for use if doors and hatches become jammed or inaccessible. Clearly marked areas on each side of the aircraft indicate proper locations for entry by cutting through the aircraft skin. Cut-in areas are located:

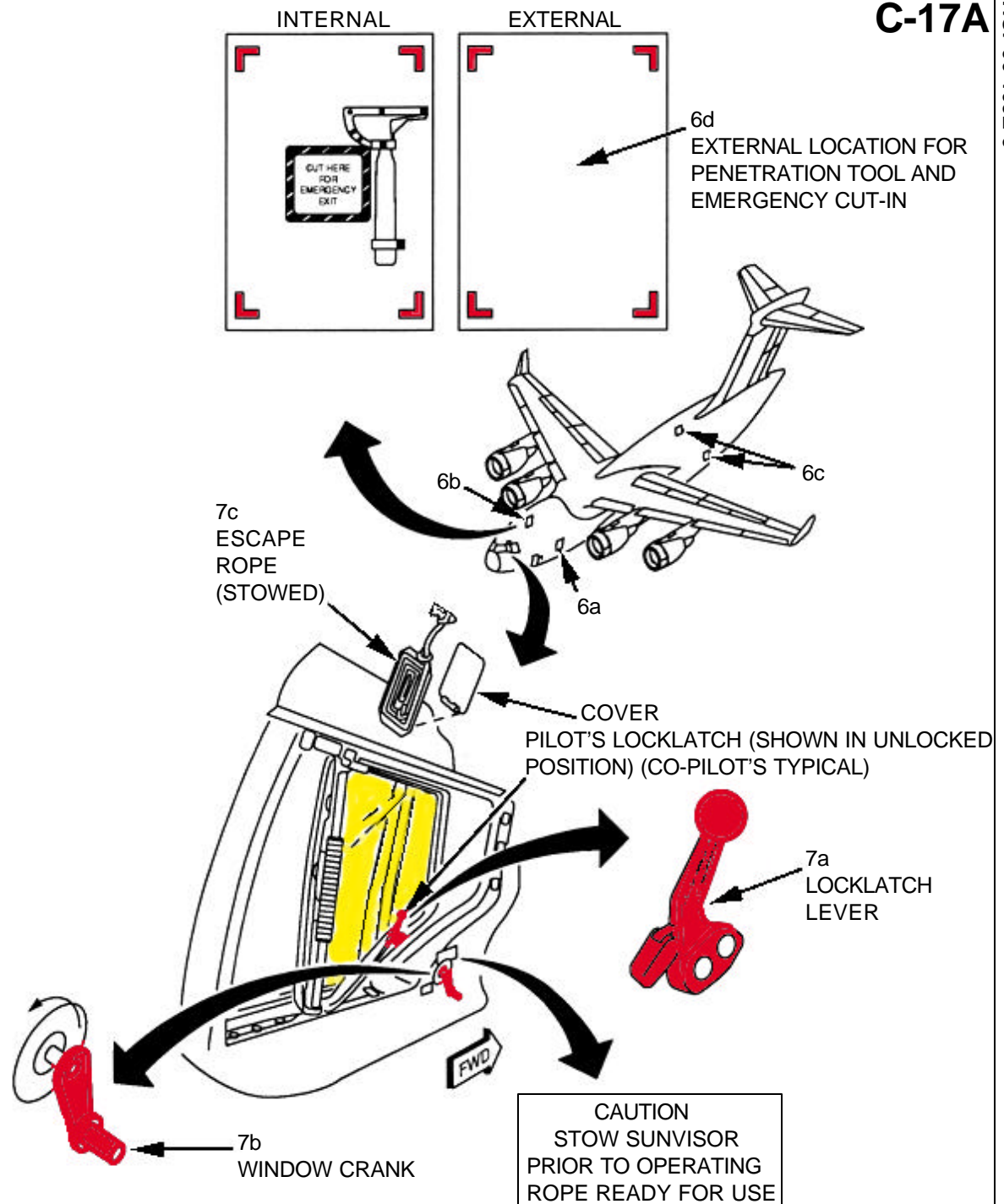
- Aft of crew entry door on left side of the aircraft.
- Aft of forward emergency escape door on right side of the aircraft.
- Aft of troop door above the juncture of the cargo ramp and cargo door on the left and right sides of the aircraft.
- Aircraft skin penetration points are limited to the center portion of the cut-in areas only.

7. SLIDING CLEARVIEW COCKPIT WINDOWS.

CAUTION

To prevent obstructing egress, stow the sun visor prior to operating the clearview windows.

- Both clearview windows are operated by depressing the lock latch lever located forward of the sliding window sill, and rotating the lever aft to unlock window.
- To open the window, push in window crank handle to engage, and rotate handle. (Pilot's counter-clockwise, Copilot's clockwise)
- An escape rope is provided above each pilot's clearview window.



C-17A

AIRCRAFT ENTRY-Continued

8. MAINTENANCE/DITCHING HATCH

NOTE:

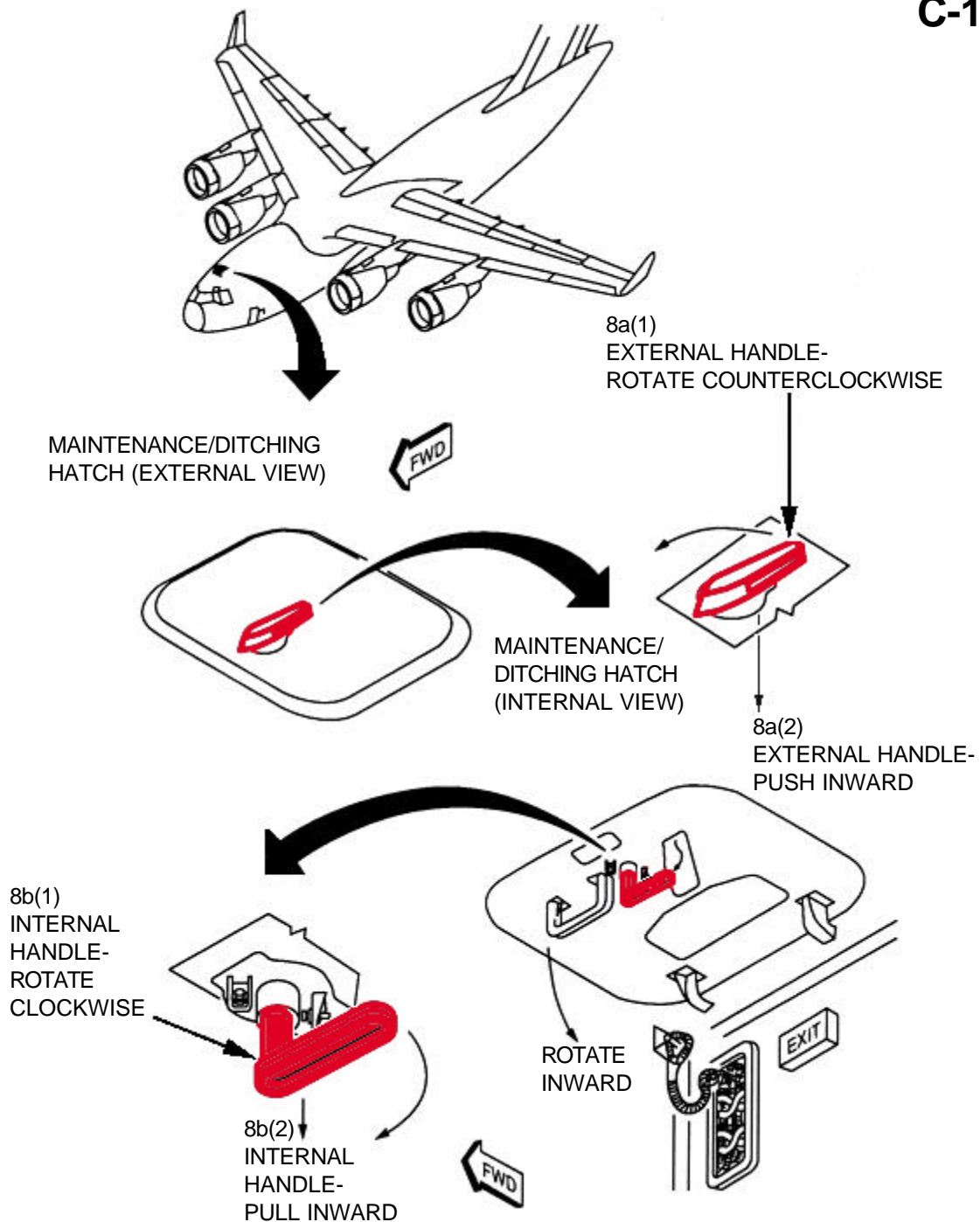
The maintenance/ditching hatch, located at top centerline in the crew bunk area, is a 26 inch X 26 inch manually operated plug type hatch that also serves as an egress for exterior maintenance of the aircraft. Internal access to this hatch is from the crew rest area, up the crew bunk area ladder, and to the aft end of the bunk area where another short rigid ladder aids in egress through the open hatch. Descent is made down the side of the aircraft by use of an escape rope.

a. EXTERNAL OPERATION

- (1) Rotate handle counterclockwise to open position.
- (2) Push inward to overcome hinge spring pressure and open hatch.

b. INTERNAL OPERATION

- (1) Rotate handle clockwise to open position.
- (2) Push inward to overcome hinge spring pressure and open hatch.



AIRCRAFT ENTRY-Continued

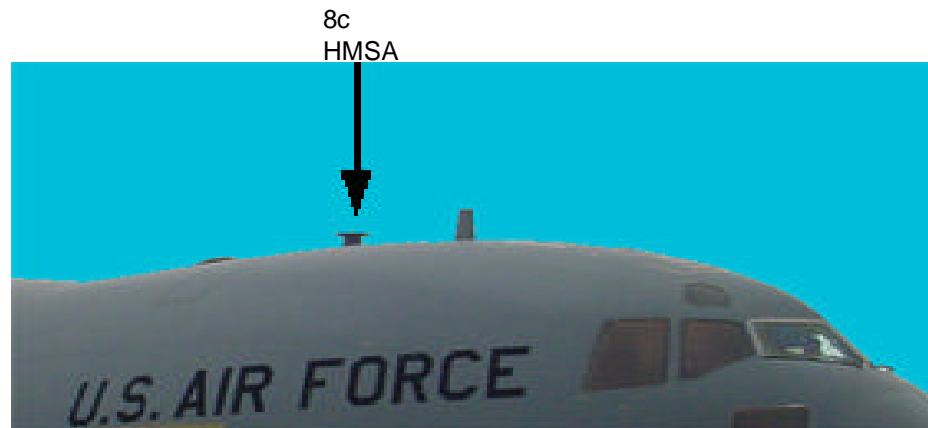
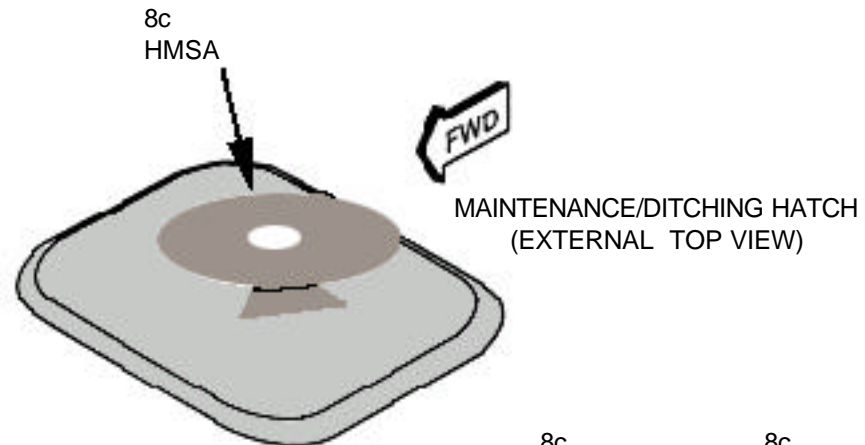
C-17A

8. MAINTENANCE/DITCHING HATCH - CONTINUED

- c. **A Hatch Mounted Satellite Antenna (HMSA) may be installed in place of the maintenance/ditching hatch.** The modified hatch weighs approximately 40lbs, and is not hinged. The HMSA hatch cannot be opened from outside the aircraft. While the HMSA hatch is installed, the unmodified hatch is restrained in the open position. The HMSA is opened from inside the aircraft by rotating the unlatch/open handle to the open position to release the locking pins. The primary exit for crewmembers in the cockpit is through the clear-view windows or through a FEDS hatch. Crewmembers in the relief crew area will use the cargo area FEDS exits as their primary ditching exit. The HMSA should not be considered a usable/primary exit.

WARNING

Because the HMSA is not hinged, the HMSA will fall directly into the aircraft when the pins are released. Clear the area beneath the hatch and the catwalk prior to opening. Do not attempt to open the HMSA without assistance.



MAINTENANCE/DITCHING HATCH (EXTERNAL RIGHT VIEW)

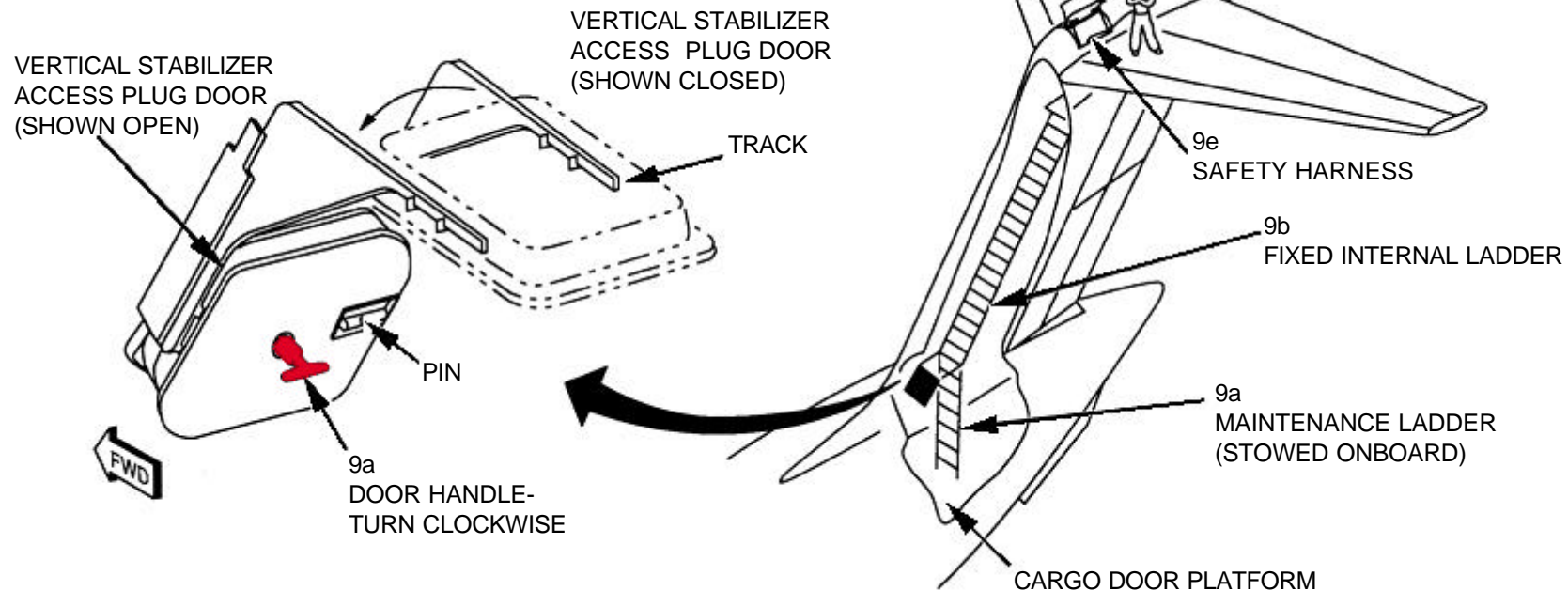
AIRCRAFT ENTRY-Continued

9. VERTICAL AND HORIZONTAL STABILIZER DOORS

NOTE:

Vertical stabilizer access is available through a plug type door located directly above the cargo door. It provides access to the vertical stabilizer and maintenance ladder leading to the upper horizontal stabilizer access doors. No external access is provided.

- Climb maintenance ladder and open vertical stabilizer access plug door by turning handle clockwise.
- Climb fixed ladder to horizontal stabilizer.
- The horizontal stabilizer access doors located on either side of the vertical stabilizer are opened from the inside.
- Each door is internally locked using four clasp type latches each.
- Use safety harness while on horizontal stabilizer.



C-17A

AIRCRAFT ENTRY-Continued

10. BELLY ACCESS SERVICE HATCH

NOTE:

A belly access service hatch is provided for system maintenance under the aircraft cargo floor area.

a. EXTERNAL OPERATION

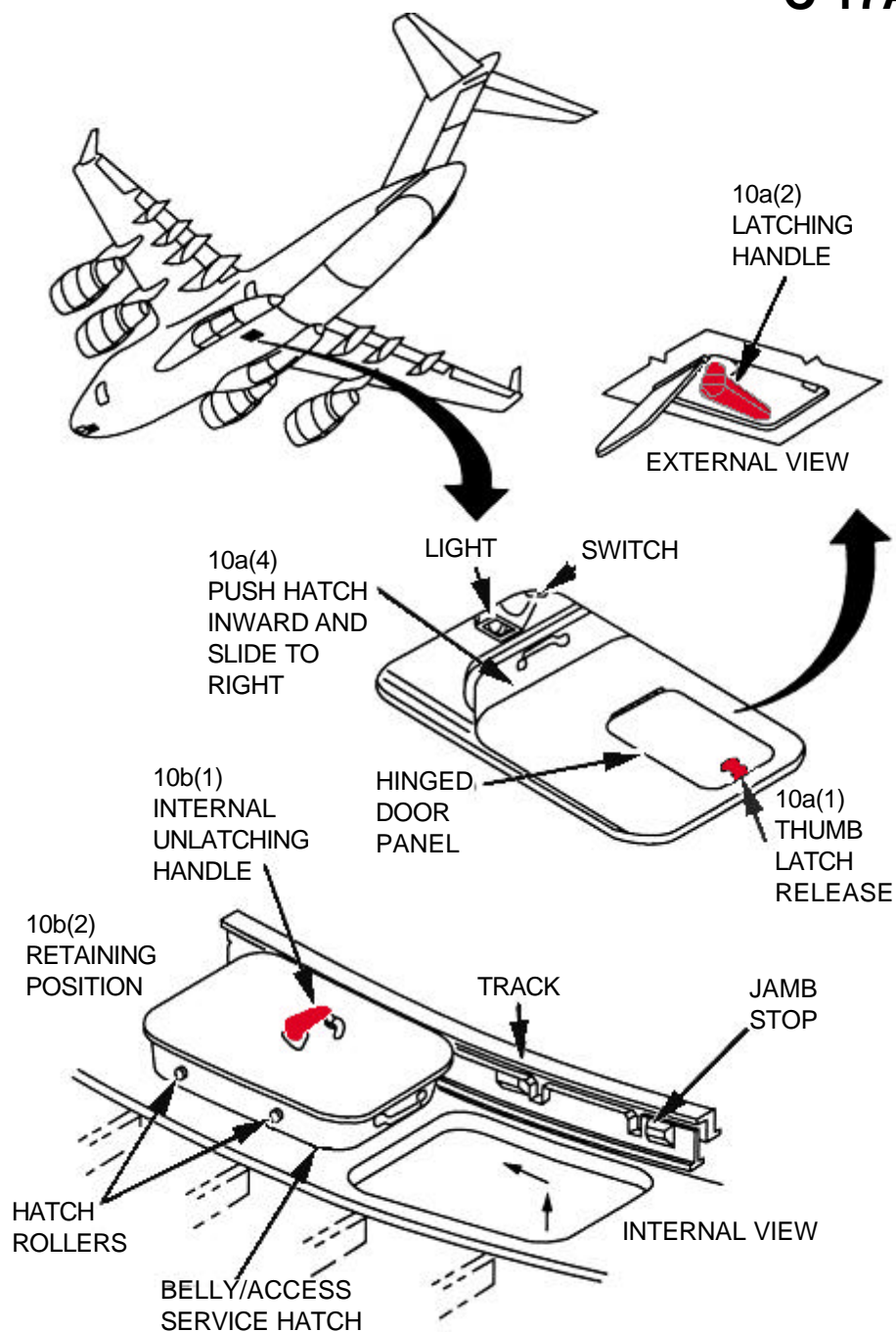
- (1) Open hatch control access cover by pressing thumb release latch.
- (2) Rotate latching handle (large handle) clockwise to unlatch position.
- (3) Close hatch cover before sliding hatch open to prevent jamming of the hatch.
- (4) Push hatch inward and slide to open position (toward right side of aircraft) ensuring hatch is retained open by spring catch.

b. INTERNAL OPERATION

- (1) Rotate latching handle to unlatch position.
- (2) Pull hatch upward and slide open (toward right side of aircraft) ensuring hatch is retained open by spring catch.

WARNING

- Do not enter the underfloor area until it is well ventilated. Injury or death to personnel may result. Nitrogen Enriched Air (NEA) in the Onboard Inert Gas Generating System (OBIGGS) storage system could leak into the underfloor environment creating a safety hazard.
- For emergency entry, Self Contained Breathing Apparatus (SCBA) is required.



AIRCRAFT ENTRY-Continued

C-17A

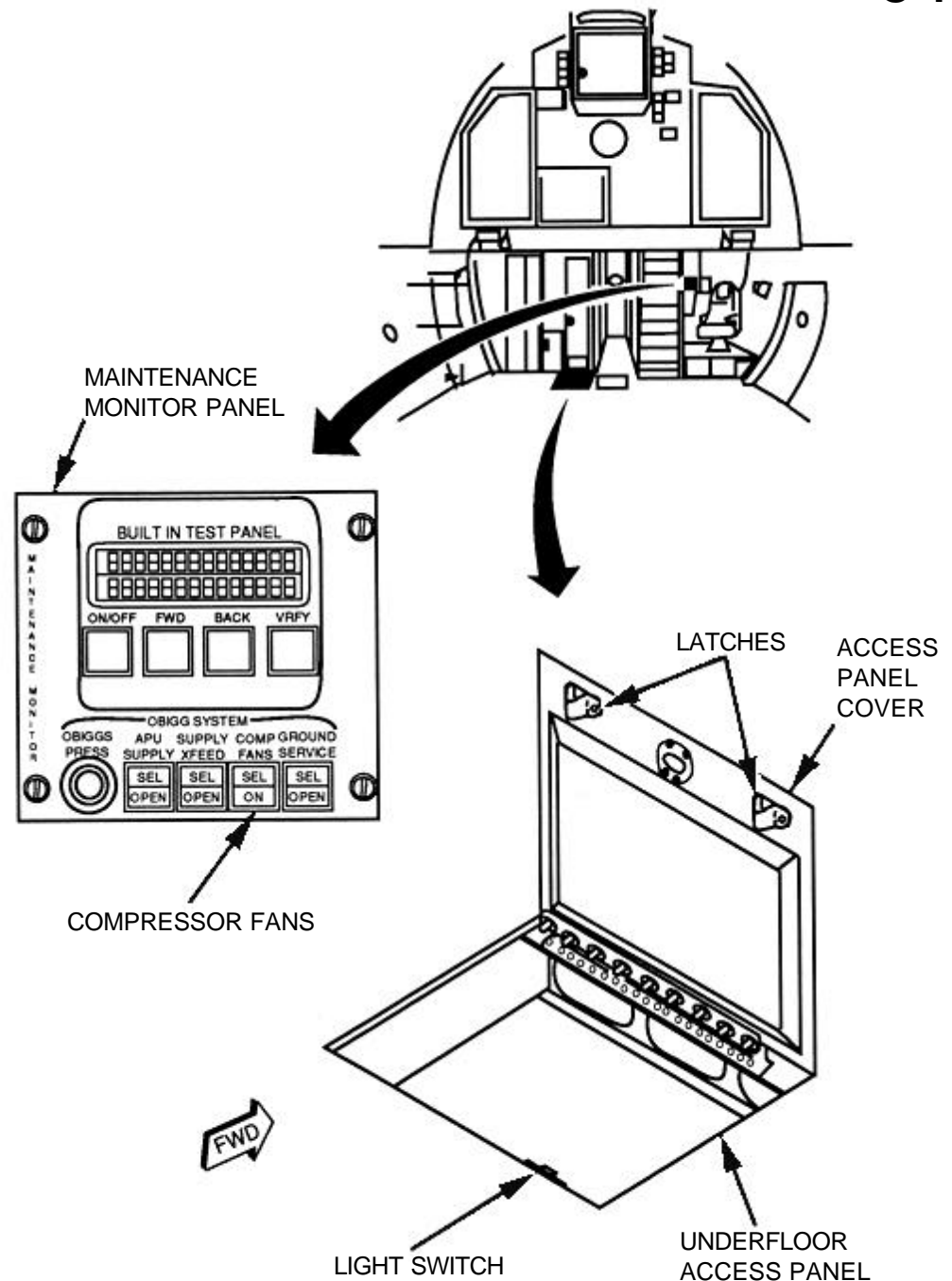
11. UNDERFLOOR ACCESS PANEL

NOTE:

Access to the underfloor maintenance area is provided through an entry in the cargo floor. The underfloor access panel is normally in the down and closed position for flight. A panel latch is provided on the aft center ledge for opening. Once opened, the access panel will swing up 90 degrees and rest against the lavatory entrance door. No securing device is provided. An underfloor light switch is provided on the aft portion of the access entrance well.

WARNING

- Do not enter the underfloor area until it is well ventilated. Injury or death to personnel may result. Nitrogen Enriched Air (NEA) in the Onboard Inert Gas Generating System (OBIGGS) storage system could leak into the underfloor environment creating a safety hazard.
- For emergency entry, Self Contained Breathing Apparatus (SCBA) is required.

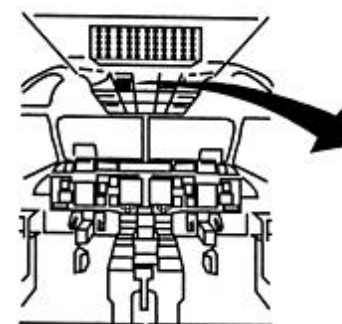
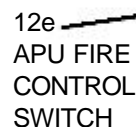
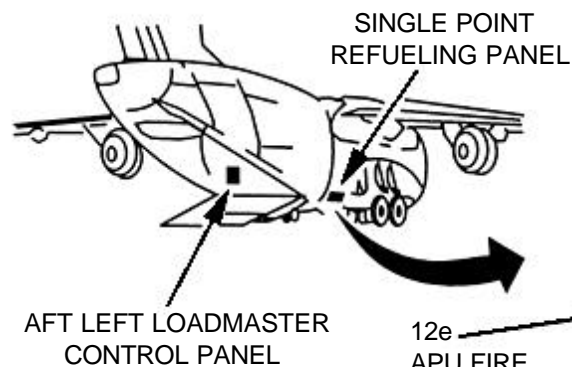


12. APU SHUTDOWN

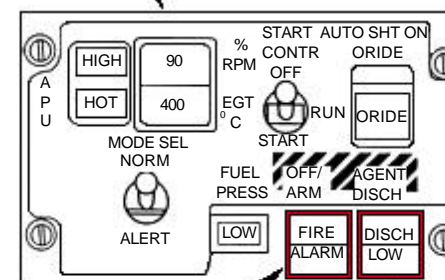
NOTE:

Two clamshell type APU servicing doors are latched in place. A small APU inlet door provides access for servicing. No start/stop switch is located on the actual APU.

- a. The APU control panel is located on pilot overhead panel, left side.
- b. In case of fire, press APU OFF/ARM switchlight to shut off electrical, hydraulic, and fuel supply to APU.
- c. Press AGENT DISCH switchlight to discharge fire extinguishing agent.
- d. The two APU FIRE control panels are located on the single point refueling panel and the aft loadmaster's station, left side.
- e. In case of fire, place the fire control switch in the OFF/ SILENCE position and release to shut off the APU and arm the discharge switch.
- f. Lift the switchguard and place the AGENT DISCH switch in the DISCH position to discharge the fire extinguishing agent.
- g. To open full size service doors, release two thumb release pin latches and four hook latches.
 - (1) Open the top panel to the full up position, then install the support strut.

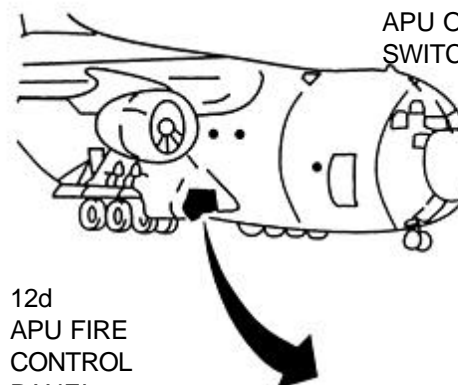


12a
PILOT'S APU
CONTROL PANEL

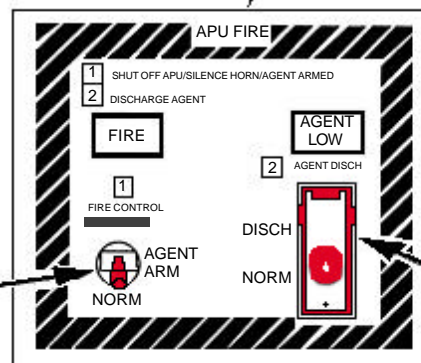


12b
APU OFF/ARM,
SWITCH LIGHT

12c /
APU AGENT DISCHARGE
SWITCH LIGHT

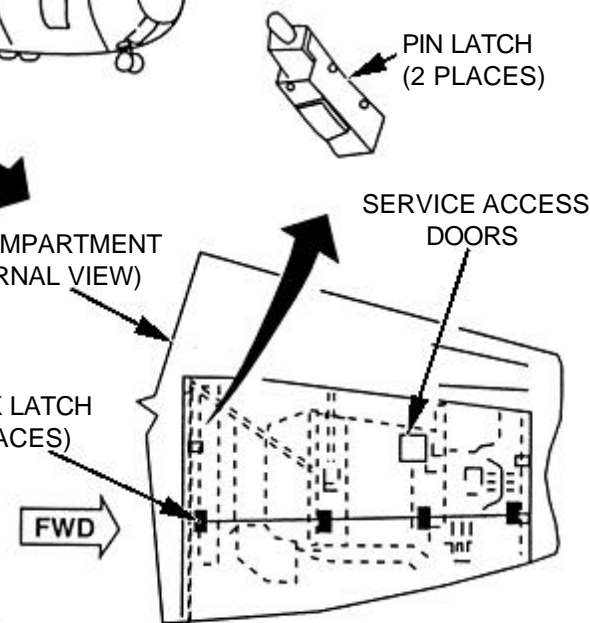


12d
APU FIRE
CONTROL
PANEL



APU COMPARTMENT
(EXTERNAL VIEW)

12g
HOOK LATCH
(4 PLACES)



12f
APU FIRE AGENT
DISCHARGE SWITCH

ENGINE EMERGENCY SHUTDOWN

C-17A

13. ENGINE EMERGENCY SHUTDOWN

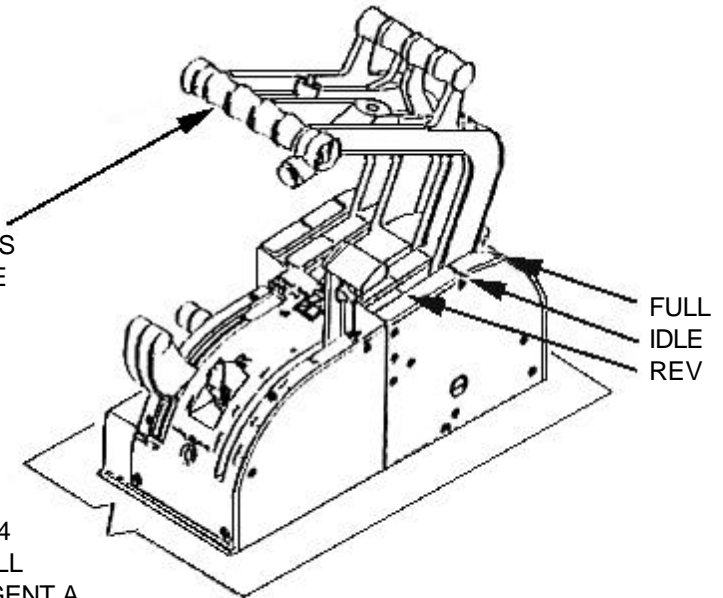
CAUTION

ROTATE T-HANDLES ONLY IN CASE OF ENGINE FIRE.

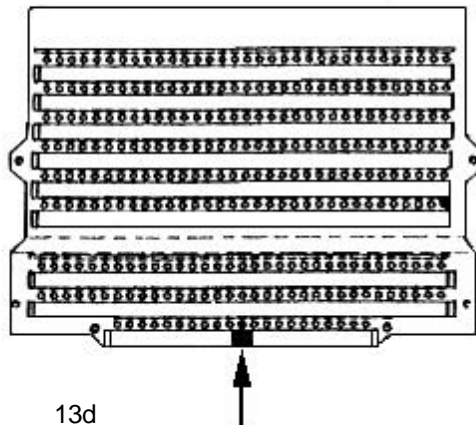
The extinguishing system is a two shot arrangement or a shared system. If agents A and B are selected for any one engine, the system for that wing will be depleted. Do not remove battery power prior to pulling FIRE T-HANDLES.

- Set throttles to idle position.
- Pull 4 FIRE T-HANDLES left, hold momentarily to release fire discharge agent A, turn FIRE T-HANDLES located on center portion of pilot instrument panel glare shield to shut off electrical, hydraulic, and fuel supply to engines.
- Turn FIRE T-HANDLES left, hold momentarily to release fire discharge agent A, turn FIRE T-HANDLES right to release agent B.
- Pull BATTERY DIRECT BUS FEED circuit breaker located on the overhead remote circuit breaker panel Row J, Column 17 to shut down emergency battery power.

13a
ENGINE THROTTLES
(DISPLAYED IN IDLE
POSITION)

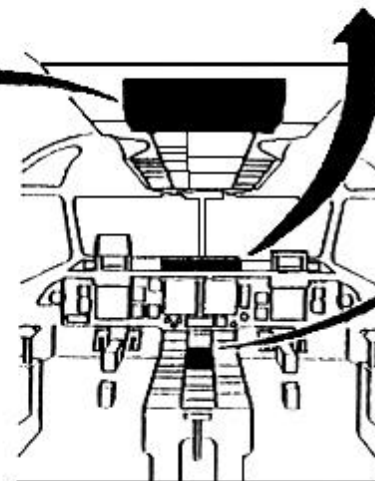


13b, 13c
ENGINE 1,2,3, AND 4
FIRE HANDLES (PULL
AND TURN, LEFT-AGENT A
RIGHT-AGENT B)



13d
PULL BATTERY DIRECT
BUS FEED CIRCUIT BREAKER

REMOTE CONTROL
CIRCUIT BREAKER
OVERHEAD PANEL



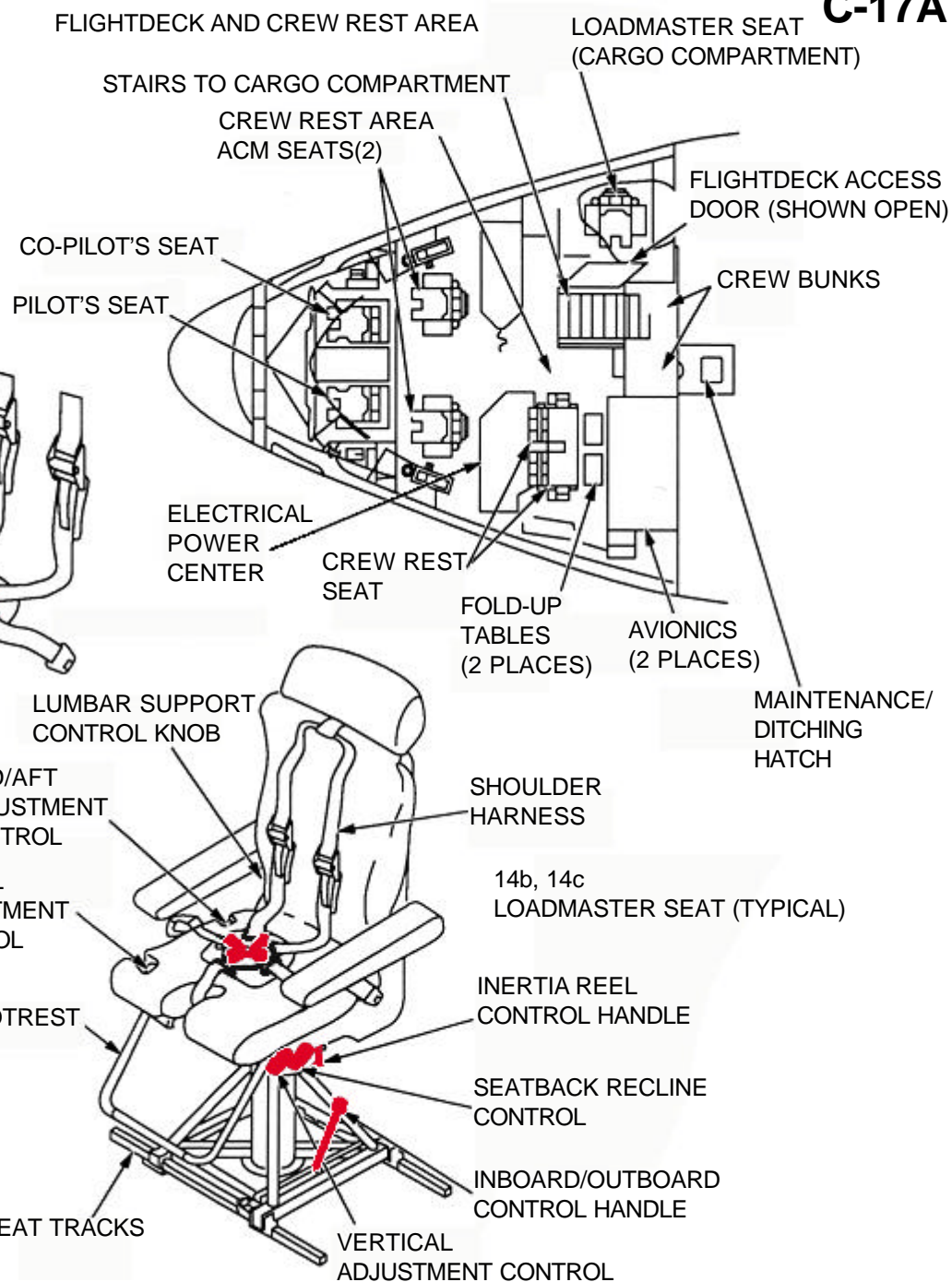
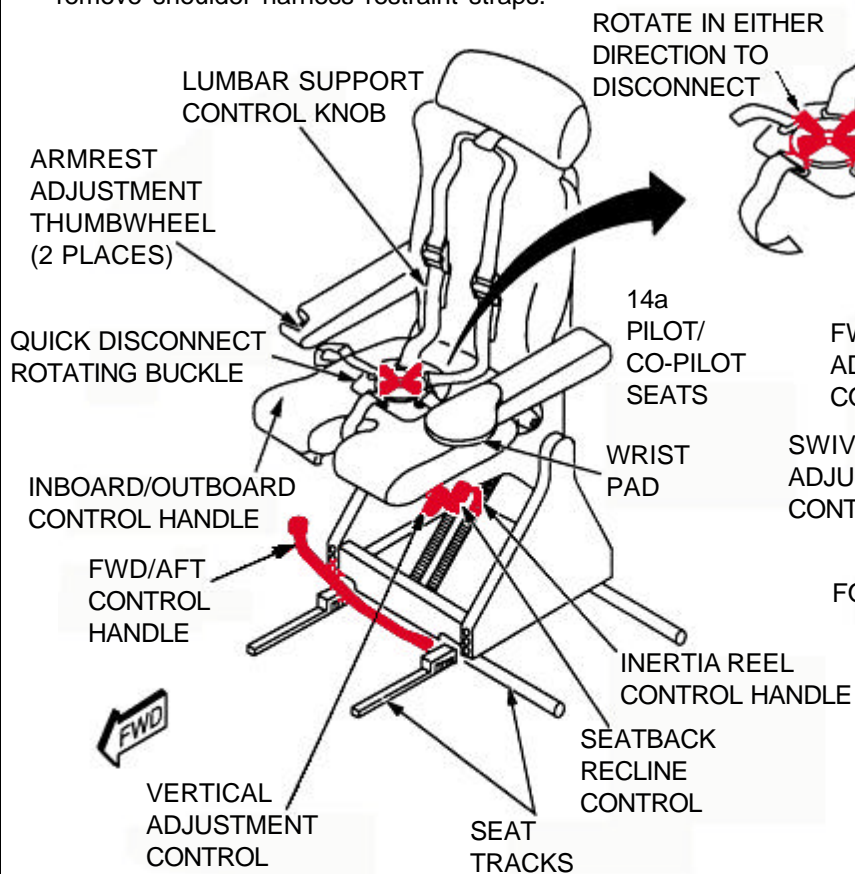
C-17A AIRCREW EXTRACTION-LEGACY SEATS

14. AIRCREW EXTRACTION

NOTE:

Flightdeck seats do not rotate.

- Pilot/Copilot seats - Retract seats aft, push seats laterally outboard then release lap belts, and remove shoulder harness restraint straps.
- Additional crewmembers (2) - Seats located directly behind flight crewmembers - Raise inboard armrests, release lap belts, and remove shoulder harness restraint straps.
- Loadmaster seat - Turn to face aft, release seat belt, and remove shoulder harness restraint straps.

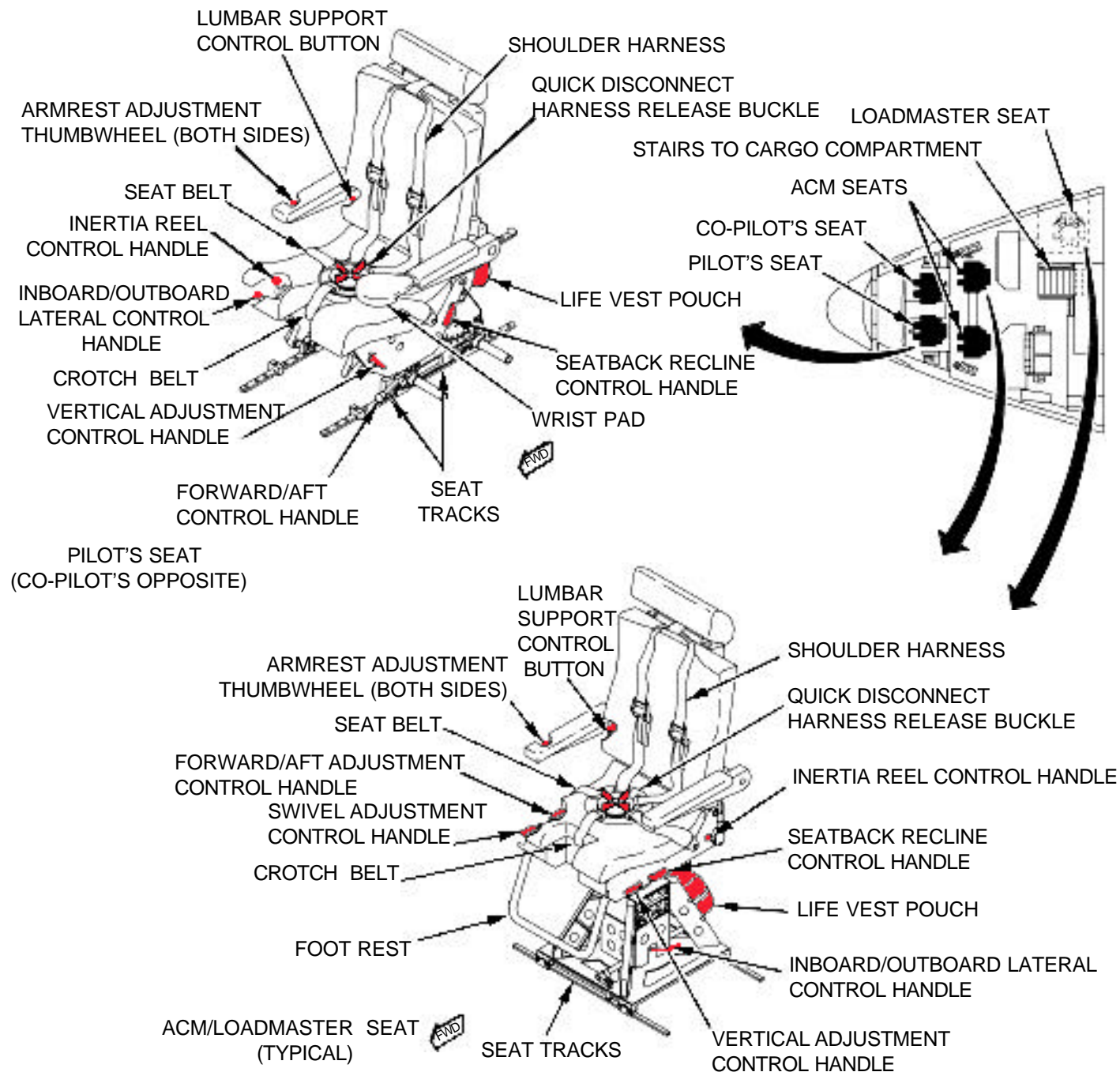


AIRCREW EXTRACTION-IPECO SEATS

C-17A

NOTE:

New crew seats manufactured by Ipeco are provided in the pilot, ACM and loadmaster positions on P-130 <FP> and subsequent aircraft. Although control locations may vary slightly by seat manufacturer, they operate the same, except as noted in this section. Ipeco and older (legacy) seats are interchangeable. Maintenance may replace a malfunctioning legacy seat on <AA>..<FN> with an Ipeco seat, or may replace an Ipeco seat with a legacy seat. On Ipeco seats, lumbar support is adjusted with a release button in lieu of a control knob. To adjust lumbar pads, press the button to release, adjust the spring-loaded lumbar support with body position, and release the button to lock in place. The seat bottom cushion on a legacy pilot, ACM and loadmaster seat may be used as a flotation device. Cushions on Ipeco seats may not be used as flotation devices. (Ref: 1C-17A-1)



AIRCREW EXTRACTION-Continued

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15. CREW REST SEATS/TROOP SEATS/LITTERS (AEROMED SYSTEM) EXTRACTION

NOTE:

Crew rest and troop seats are equipped with lap belts only.

- a. Crew rest area seats (2) - Release lap belts. Center armrests can be stowed to the up position to facilitate crewmembers removal.

